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The Impact of Knowledge Competence on Company Performance of Small and Medium Enterprises in Kazakhstan

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ABBREVIATION

DIKW	Data, information, knowledge and wisdom
GDP	Gross domestic product
GEM	Global Entrepreneurship Monitor
ICT	Information and communication technology
IT	Information technology
KAAS	Knowledge asset accounting strategy
KACS	Knowledge asset communication strategy
KAMS	Knowledge asset measurement strategy
KDAS	Knowledge domain assessment strategy
KM	Knowledge management
KPI	Key performance indicators
OECD	Organisation for Economic Cooperation and Development
R&D	Research and Development
SECI	Socialization, Externalization, Combination, Internalization
SMEs	Small and medium-sized enterprises

INTRODUCTION

The Relevance of the Research. In the current economic situation knowledge is considered as the main source of competitive advantage. Especially, small and medium sized enterprises ability to develop and use knowledge affects its sustainability and further success in the marketplace.

The theory of knowledge management suggests different approaches towards understanding of knowledge as an organizational concept, although all of them are not studying knowledge competence independently. In this research we study knowledge competence as a company's capability to exploit knowledge and by that developing knowledge in other specific areas of organization.

Changes and shifts in the economy make organizational knowledge as a reliable resource which can be minimized from the external influence. Development of organization requires acquisition of needed skills and knowledge. Therefore, company's ability to exploit this knowledge creates knowledge competence. Moreover, the strategic role of knowledge makes it both important on individual and organizational levels. Employees are creators of knowledge in a company and their role is mainly on their ability to use knowledge in company's operations.

Economic development of the country highly depends on knowledge resources, the human capital that possess the knowledge. The President of the Republic of Kazakhstan N.A. Nazarbayev in his Addresses had emphasized the importance of small and medium enterprises, its role and significance for economic development of Kazakhstan [1,2]. In the context of the current programmes supporting development of enterprises the Programme for Industrial Innovative development 2015-2019 is targeted to support companies in creating value added products to minimize dependence on natural resources. Moreover, this programme is focused on the development of small and medium enterprises. The company's ability to produce product which will be able to compete on a global market and in conditions of increased competition is ensured by company's ability to generate and use required knowledge.

Currently, there is gap in the area of knowledge development in SMEs in Kazakhstan and its impact on performance. Therefore, this study can contribute to SMEs organizational development and for further development of policies in this area. Government's active role in supporting SMEs creates positive results, which is already proven by our analysis of SMEs over the past 10 years based on the data from Statistical Agency, but still internally SMEs capabilities are very limited. Recommendations given by this research will positively affect internal changes of SMEs in terms of organizational knowledge base creation and use of knowledge.

The level of the topic scientific development.

Approaches on knowledge competence in organizations are reflected in the theories of knowledge management (I. Nonaka, Wiig, Dalkir, Von Krogh), resource-based view of the firm, competence based-view of the firm (Sanchez, Heene, Thomas, Grant, Barney), and learning organization (I. Senge, Argyris). In

Kazakhstan, the issues of knowledge management were reflected in the papers of S.R. Yessimzhanova [3], T.S. Satkaliyeva [4], A.N. Sakhanova [5], B.L. Tatibekov [6], G.Zh. Tayauova, Z.K. Chulanova [7] and others.

Issues of knowledge development and SMEs development were presented in the studies of K. Moustaghfir, J.Schiuma, T. Andreeva, A. Kianto, H.Mintzberg, E. Ofek, M. Sarvary, A. Lerro, E.Wu and others.

It is important to state that research in the area of knowledge competence is limited, particularly related to SMEs in Kazakhstan

The purpose of the dissertation research is to develop theoretical – methodological aspects of knowledge competence development in SMEs in Kazakhstan with its influence on company performance.

In accordance with that, the following **objectives** were formulated:

- to define and clarify the theoretical content of the concept of "knowledge competence";
- to identify and study main elements of knowledge competence;
- to investigate the influence of moderating factors such environment dynamism and uncertainty, size, industry and technologies on the relationship between knowledge competence and company performance;
- to study small and medium enterprises in order to identify the knowledge management development;
- to build a model of knowledge competence influence on company performance in small and medium enterprises;
- to define suggestions for knowledge competence management in small and medium enterprises.

Object of study is small and medium enterprises in Kazakhstan.

Subject of study is the set of theoretical, methodological and practical issues in managing knowledge competence in small and medium enterprises.

Research methods. We use the methods of theoretical modeling, logical, systematic, statistical analysis of the data with computer software SPSS Statistics (Statistical Package for the Social Sciences) for Windows 21.0.

Theoretical and methodological base of the research consisted of research studies of local and foreign scientists in the area of knowledge management.

The system and complex approaches were used as **the methodological basis of the research**. In the research methods of quantitative and qualitative analysis, economic-statistical information processing and modeling were used.

The information base for the research have constituted the data of the Committee of Statistics of the Republic of Kazakhstan, research materials on studied topic, data of World Bank, Global Entrepreneurship Monitor (GEM), internet resources and database created by the author during the research.

Scientific novelty of the dissertation research is the following:

- on the basis of theoretical and methodological research, the author's definition of "knowledge competence" is given;
- the factors that create knowledge assets and capabilities are identified;

- the model for assessment of the relationship between knowledge competence and market and organizational performance in small and medium enterprises in Kazakhstan is developed;
- the analysis of knowledge competence influence on performance of small and medium enterprises is made;
- the recommendations for the knowledge competence development in small and medium enterprises, for its strategic development in the conditions of knowledge-based economy are proposed.

The main scientific provisions for the defense are:

- the author's definition of "knowledge competence" which is defined through assets and knowledge capabilities in organization;
- the methodology for identification of knowledge assets and knowledge capabilities;
- the model of knowledge competence and its influence on performance in small and medium enterprises;
- the results of the analysis of small and medium enterprises through the model of knowledge competence influence on performance in small and medium enterprises;
- proposals for the development and improvement of knowledge competence in small and medium enterprises in the context of state programs and further development of small and medium enterprises in the Republic of Kazakhstan.

Practical significance of the study.

The results of this study have practical importance and significance as a guide for small and medium enterprises, as well as program developers, in order to create favorable conditions for the development of knowledge at enterprises in Kazakhstan. The results of the research can be used in state programs as the Program of Industrial and Innovative Development for 2015-2019, the Business Roadmap - 2020. Small and medium-sized businesses can use the tool of this study to measure their own level of knowledge competence development. In the case of the creation and implementation of current state programs aimed for the development of small and medium businesses, this study assesses the current situation and proposes recommendations for improvement. In the future, it can be used by small and medium businesses for strategic planning purposes.

The results of the research were implemented in the project "Business Relations" of the National Chamber of Entrepreneurs "Atameken" to provide support to small and medium business entities operating in the priority sectors of the economy as part of the "Business Roadmap-2020" program. There is an act of implementation.

The main theoretical provisions of the thesis are introduced in the teaching of disciplines "Innovation Management", "Strategic Management", "Introduction to Management" and "Human Resources Management". There are acts of implementation.

Approbation of work. The main propositions and results of this study were reported at international scientific and practical conferences: 5th «World Conference

on Education Sciences», Sapienza University, Rome; 15th International Conference Global Business and Technology Association «Globalizing business for the next century: visualizing and developing contemporary approaches to harness future opportunities», Helsinki; 5th «International Congress on Entrepreneurship», Suleyman Demirel University, Kaskelen; 2th International Conference on «Innovation and Entrepreneurship», Bangkok University, Bangkok.

Publications.

There are 8 papers published on the dissertation topic, with total volume of 2.7 printed sheets, 3 of which are published in journals, recommended by the CCES MES RK.

The structure and scope of the thesis.

The thesis consists of an introduction, three chapters, conclusion, references and appendix.

1 THEORETICAL ASPECTS OF KNOWLEDGE COMPETENCE

1.1 Theoretical background knowledge competence and knowledge management

Definition of knowledge

Drucker defined knowledge as an important resource [8]. Davenport and Prusak defined it as a “fluid mix of framed experiences, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information” [9, p.5]. This view related to concepts such as “information”, “data” with some distinctions to “knowledge”. Data, information and knowledge are concepts which related to the ability to build a value. Moreover, data, information and knowledge are interrelated elements of one hierarchy [10]. From this point, knowledge is a creator of innovations and changes. Data and information converted to knowledge through organization, interpretation and application while knowledge is created by validation and internalization. Knowledge is the last step in the value-added knowledge process which has a value after several processes. Data and information are basic elements which are collected, organized and summarized. When knowledge is being analyzed, synthesized and used in decision-making process, as a result it possess a value. Thus, value of knowledge is used for creation and introduction of innovations. Therefore, researchers identify data, information, knowledge and wisdom (DIKW) hierarchy [11-13]. DIKW hierarchy represents pyramid where all levels are related and data is transformed to wisdom.

Furthermore, many authors, including Nonaka and Takeuchi, Grant, Fahey and Prusak, Von Krogh, Spender identified the perspective on knowledge in the organizational context. In this view, the role of individuals as holders of knowledge is significant and knowledge considered as a strategic resource for organization which helps to achieve competitive advantage [14].

In order to understand the nature of knowledge in organization it is important to consider different views of knowledge. According to Maria Jakubik there are four views of knowledge: ontological view, epistemological view, commodity view and community view [15]. Ontological perspective of knowledge explains that organization creates knowledge with the help of individuals. Epistemological view of knowledge makes a distinction between tacit knowledge and explicit knowledge. Tacit knowledge is knowledge that can't been formalized, i.e. it is not written or recorded. Explicit knowledge is an opposite of tacit knowledge, i.e. knowledge is recorded. The distinction between tacit and explicit knowledge determines processes related to knowledge in organization. The third perspective is a commodity view where knowledge is described as a commodity. It is an asset which can be transferred and managed. The fourth, community view considers knowledge as a changing element which is created by individuals during social interactions. Knowledge has unique characteristics and its role in organizational context is significant. Moreover, individuals as holders of knowledge have a major influence on organizational processes related to knowledge.

Definition of competence

Competence is an important factor for organizations strategic thinking. Competence can be considered from two different perspectives: individual and organizational. Individual perspective focuses on characteristics which improve human or individual performance. According to Hartle competence is defined as “a characteristic of an individual that has been shown to drive superior job performance includes both visible competencies of knowledge and skills and underlying elements of competencies, like traits and motives” [16, p.107].

Organizational perspective on competence is linked to strategy and presented by core competence. Lustrì et al. considered competence as a combination of personal resources such as knowledge, abilities and qualities and environmental resources such as technologies, books and networks. Freiling (2004) defined competence as an “organizational, repeatable, learning-based and therefore non-random ability to sustain the coordinated deployment of assets and resources enabling the firm to reach and defend the state of competitiveness and to achieve the goals” [17, p.30]. When competences differentiate particular company from its competitors they become a distinctive or core competences. According to Wheelen and Hunger the essential strength of the core competence is in its value, rareness and inimitability. Hamel and Prahalad considered core competence of organization linked to the learning [18].

Dynamic environment and strategic management stimulate the development of new competences through management processes in organization [19]. In this context competence is used to explain company’s dynamic capabilities. As it becomes a source for organizational functioning and long-term development.

Organizational environment, level of competition and changes in industry stimulate organizations to use its competences. Sanchez defined 5 modes which are the ways for organization to use its competences to respond to changes [20]. The first mode of competence is a cognitive flexibility to define alternative strategic logics. It means that organization can create value by offering new products or services to satisfy needs of customers. The second mode of competence is a cognitive flexibility to define alternative management processes. This mode related to the first mode and includes ability to determine all resources, procedures and processes that are needed to perform the mode one. The third mode is coordination flexibility to identify, configure and deploy resource chains. Organizations reconfigure and use the most appropriate resources to offer new products for market. The fourth mode is resource flexibility to be used in alternative operations. It is about creating alternatives for the use resources that could offer new products. The fifth mode is operating flexibility in using available resources. Organizations use its resources to perform more effectively and efficiently in operating processes.

Competence whether organizational or individual possess skills, resources and knowledge including capabilities. The uniqueness of competence makes it critical factor for company’s ability to achieve goals and follow organizational strategy.

Definition of knowledge competence

Literature in the area of knowledge competence distinguishes knowledge competence and core knowledge competence. Definitions are based on the assumption that knowledge is essential for organization and affects company's ability to compete. The term core knowledge competence was defined by Allee. She defined core knowledge competence in terms of unique knowledge and expertise related to specific discipline. Moreover, core knowledge competence is not the same as core performance capability, because some authors use competence and capability interchangeably. The essence of core knowledge competence is in company's unique knowledge and expertise which differentiate it from competitors while core performance capability are the processes which "enable a company to deliver high-quality products and services with speed, efficiency and high customer service" [21, p.21]. Therefore, capabilities create favorable conditions to use organizational core knowledge competences. One of the types of knowledge competence is market knowledge competence. According to Li and Calantone market knowledge competence is the process that create and integrate market knowledge [22]. Although, this specific type of knowledge competence represents competence of organization as a core competence, where it aimed to gain strategic asset.

The definition of Allee only concentrates on knowledge competence from knowledge assets perspective. However, the definition of knowledge competence by Ning et al. presents more complex view on knowledge competence. They consider knowledge competence as a "knowledge system that can synergy and reconstruct the resources, knowledge and capabilities within and without the organization to realize the harmonious development with its environment" [23, p.1368]. Knowledge competence consists of knowledge accumulating capabilities and knowledge operating capabilities because knowledge assets are depend on those capabilities and limited to represent knowledge competence. Knowledge accumulating capabilities include learning capability and knowledge assets while knowledge operating capability consists of culture capability, communicating capability and innovation capability. Knowledge accumulating capabilities "make the quantity and quality of the knowledge assets adapting to the competitive environment" and knowledge operating capabilities "make the knowledge assets effective and profitable" [23, p.1368]. These elements of knowledge competence create a relationship where the level of each determines the level of knowledge competence, where higher the level of the components of knowledge competence, the higher knowledge competence itself (figure 1). Based on the below, we consider that knowledge competence is the combination between knowledge assets and knowledge capabilities which create knowledge competence for the development of core competences in the organization. It means knowledge capabilities are conditions or a capacity to deploy resources that company has for any knowledge development in the organization. Based on the literature on knowledge competence, we identify four knowledge capabilities: learning capability, culture capability, communication capability and innovation capability.

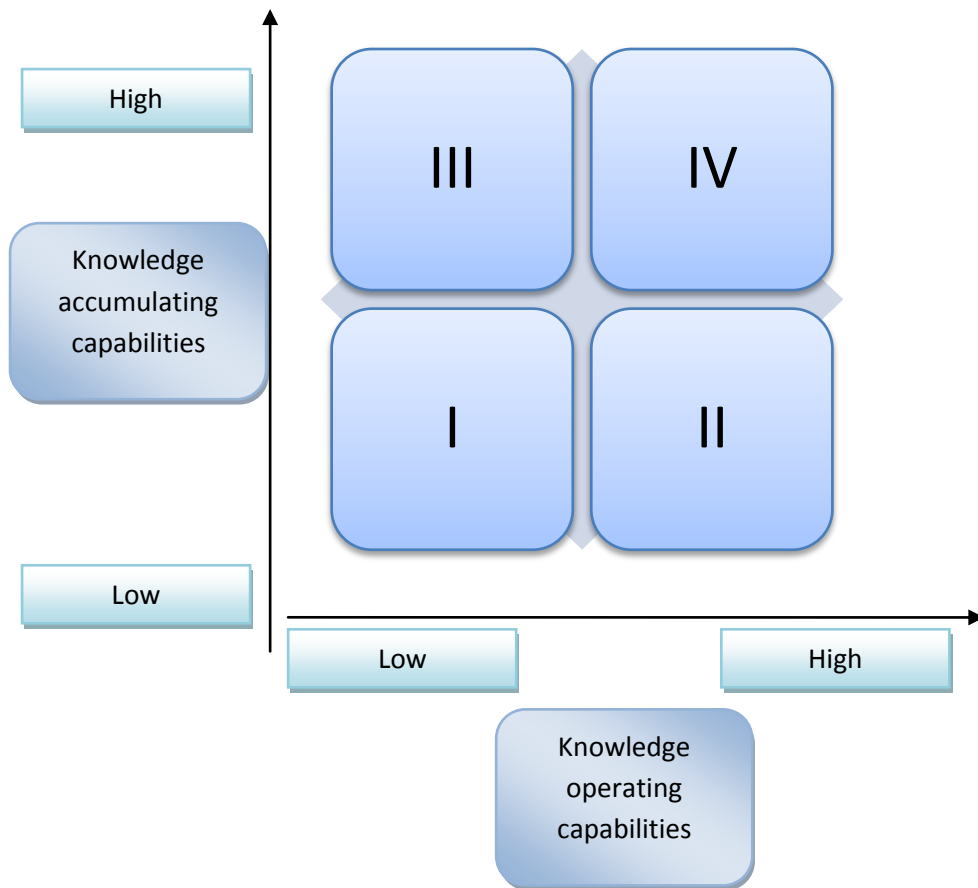


Figure 1 - The relationship between components of knowledge competence

Note - Adapted from the literature source [23, p. 1368]

However, without knowledge assets these capabilities don't have value to organization in terms of knowledge competence development. Therefore, knowledge competence is the capability of the organization to use existing knowledge assets with the support of knowledge capabilities (figure 2). It means that core competence in any area could be achieved only when company possess knowledge competence.

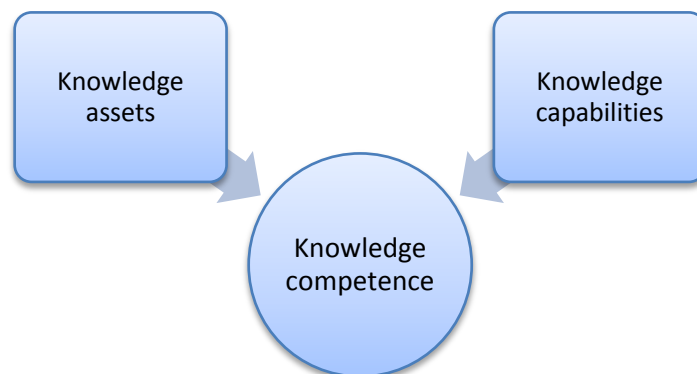


Figure 2- Elements of knowledge competence

Note - Compiled by author

Knowledge competence elements

Knowledge assets

Knowledge assets are elements of knowledge creation processes. Knowledge-base assets are defined as “anything valued without physical dimensions that is embedded in people or derived from processes, systems and the culture associated with an organization – brands, individual knowledge, intellectual property, licenses, and forms of organizational knowledge (e.g. databases, process know-how, relationships)” [24, p.2]. According to Moustaghfir (2008) knowledge assets are “strategically relevant intangible resources a firm possess which can take the form of employees’ skills and know-how, organizational routines, relationships with stakeholders, organizational image and reputation, technological infrastructure, and intellectual property” [25, p.16].

According to Polanyi (1966) tacit knowledge is personal, context-specific and not easily visible and expressible [26]. However, tacit knowledge is needs to be converted into explicit to be understood by others. Moreover, some of the knowledge cannot be formalized. Tacit knowledge allows organization to have unique knowledge because it is difficult to transfer it outside the organization and organization has competitive advantage. Between tacit and explicit knowledge there is an implicit knowledge. Implicit knowledge “results from the induction of an abstract representation of the structure that the stimulus environment displays, and this knowledge acquired in the absence of conscious, reflective strategies to learn” [27, p.219].

According to Nonaka and Takeuchi (1995) tacit knowledge has two dimensions: technical and cognitive. Technical dimension defines concrete "know-how" which is used in particular environment. Cognitive dimension is about perception and mental models of an individual. Polanyi identified that explicit knowledge is all codified in words, numbers, models or diagrams. Moreover, this kind of knowledge can be stored in databases. However, all knowledge is tacit by its nature and when part of it can be transmitted it become an explicit knowledge.

The concept of “intangible assets” is also related to the company’s knowledge assets. According to Dawson there are three categories of intangible assets: human capital (skills of individuals), structural capital (organizational infrastructures), relationship capital (brand, relationships with suppliers and clients) [28]. Moreover, intellectual capital defined as “the group of knowledge assets that are attributed to an organization and most significantly contribute to an improved competitive position of this organization by adding value to the defined key stakeholders” [29, p.6]. Intellectual capital is divided into three categories: organizational capital, social capital and human capital (figure 3). Organizational capital is explicit knowledge of organization which is documented in papers, procedures etc. It is knowledge which available for all employees of organization because of its explicit nature. Social capital includes resources created by networks and interpersonal interactions. Moreover, it can be estimated by two categories such as structure and quality of relationships. Structure of networks identifies those who maintain the

contact. While, relational embeddedness identifies the quality of relationships developed over time. Human capital consists of knowledge, experiences, skills, capabilities, innovativeness and creativity of individuals.

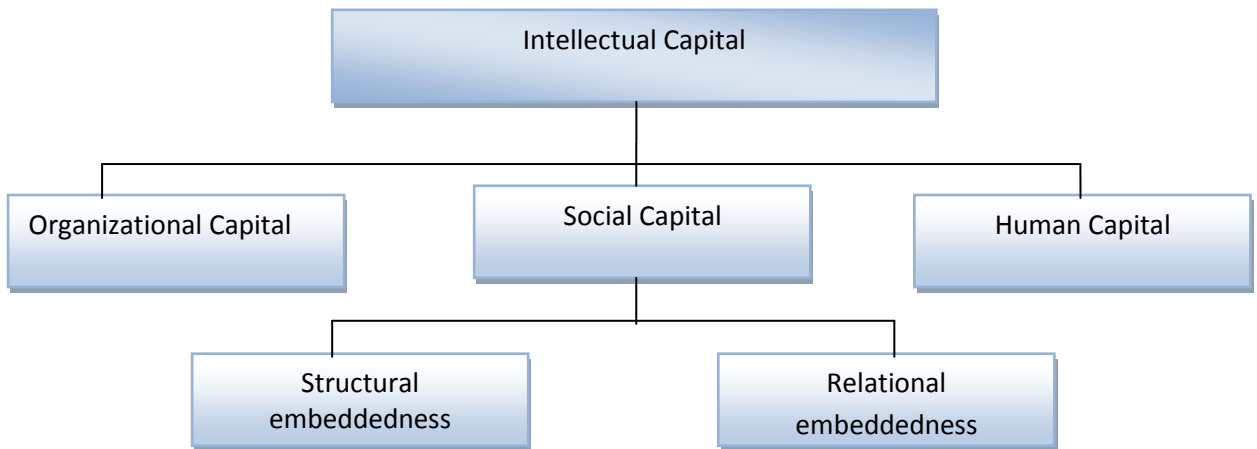


Figure 3 - Intellectual capital

Note - Adapted from the literature source [30]

According to Nonaka, Toyama, Konno (2000) there are four categories of knowledge assets: experiential, conceptual, routine and systemic (Table 1). Experiential knowledge assets consists of skills and know-how, care and trust, energy, passion and tension. Conceptual knowledge assets are product concepts, design, brand equity and other explicit knowledge which are presented in symbols and images. Routine knowledge assets are know-how in daily operations, organizational routines and culture. Systemic knowledge assets include documents and manuals, patent and licenses, databases.

Table 1 - Categories of knowledge assets

Categories of knowledge assets	Characteristics
Experiential knowledge assets - tacit knowledge shared through common experiences	-skills and know-how of individuals - care, love, trust and security -energy, passion and tension
Conceptual knowledge assets - explicit knowledge articulated through images, symbols and language	-product concept -design -brand equity
Routine knowledge assets - tacit knowledge routinized and embedded in actions and practices	-know-how in daily operations -organizational routines -organizational culture
Systemic knowledge assets - systemized and packaged explicit knowledge	-documents, specifications, manuals -database -patents and licenses
Source - Adapted from source [58, p.20]	

Experiential knowledge is tacit knowledge which exists in the mind of employees. Skills and know-how are expertise which is learned because of the experience. The know-how creates possibilities for organization to strengthen these skills to compete on the market. The unique characteristic of tacit knowledge allows organization to keep peculiarities of know-how in the organization and not allowing its competitors to know about them. However, skills and know-how directly related to employees because only they have required skills to perform certain tasks. Know-how allows organization to transform inputs into outputs. Trust is the important element for the knowledge accumulation. On the basis of trust new tacit knowledge could be created in the organization during the sharing process. Trust is a “set of beliefs about the other party (trustee), which lead one (trustor) to assume that the trustee’s actions will have positive consequences for the trustor’s self” [31, p.598]. When employees trust each other they are willing to share knowledge and be open to listen for their colleagues. It creates essential communication for knowledge creation. Many authors mentioned the importance of trust for knowledge transfer between employees, the employee and client relationship, and between different organizations. Trust creates creativity because of the openness it creates during communication and interactions. In the organization there are three types of organizational commitment which influences trust and attachment to the organization and colleagues as well: affective (a feeling of emotional attachment to organization), continuance (a feeling of needing to continue employment) and normative (a feeling of obligation towards the organization) [32].

Conceptual knowledge assets are the results of the use of tacit knowledge in the organization. Because conceptual knowledge assets are symbols and images they represent the outcomes of tacit knowledge transfer, knowledge sharing which helped to create those concepts, brand equity and design. Conceptual knowledge assets it is what perceived from the external environment and is noticeable rather than skills and know-how. Routine knowledge is the daily operations and routines which help organization to create new knowledge and make the daily procedures more beneficial for the company. Systemic knowledge is all the explicit knowledge which organization has. It is all the results of use of tacit knowledge of the organization which is resulted in the explicit form.

Because knowledge assets are closely related to individuals and tacit it is important for organizations identify its knowledge assets.

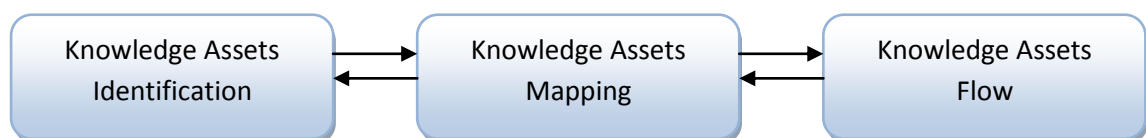


Figure 4 - The managerial foundations of knowledge assets

Note - Adapted from the literature source [33, p. 292]

In this model managing of knowledge assets has three steps (figure 4). The first step is acknowledging existence of certain knowledge which can bring value.

The second stage which is a knowledge assets mapping, brings knowledge into one connection. The third step includes interaction between knowledge and its development.

Thus, knowledge assets are tacit and explicit knowledge of organization which can be codified and created inside the organization. However, knowledge assets are always unique. Employees' tacit and explicit knowledge are related to gaining company's knowledge competence. But they are differently accepted inside organization because of their different forms.

Teece proposed a framework for capturing value from knowledge assets (figure 5). In this framework he suggests that external environment affects the ability to create and capture value in the organization. The dynamic capabilities influence knowledge assets to achieve sustainable competitive advantage.

This framework describes the relationship of knowledge assets with the strategic developments in the organization. Moreover, it shows that knowledge can be an organizational competence which brings value to the organizational development in the form of improved performance. This framework suggests that tangible and intangible assets are the core for company's development in the conditions of unstable external environment. The survival of the organization depends on its ability to use core competencies to improve short-term and long-term position of the company.

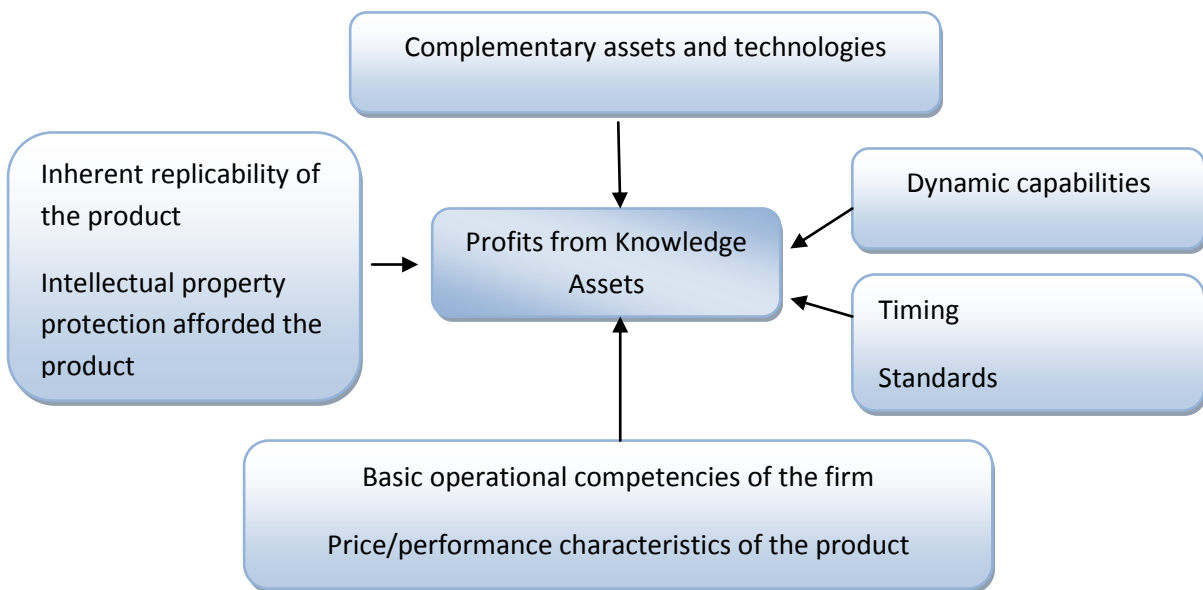


Figure 5 - Capturing value from knowledge assets

Note - Adapted from the literature source [34, p. 73]

The ability of organizations to have knowledge assets as an organizational knowledge, which also belongs to employees of the company as they are the main holders of knowledge creates one of the elements of knowledge competence.

However, without the suitable knowledge assets, company cannot have knowledge competence.

Knowledge capabilities are conditions that company has to ensure that knowledge could be a competence in a company. Knowledge capabilities include learning capability, culture capability, communication capability and innovation capability.

Learning capability

The literature in the area of learning considers several aspects as knowledge is an important resource for organizations and companies that involved in learning are constantly change. Learning allows companies to work with changes and successfully avoid adaptation [35]. Nevis et al. identified three perspective on organizational learning: normative perspective - special conditions create the environment for organizational learning; developmental perspective - learning is a part of organizational development process; capability - learning exists in any organization from the beginning [36]. Organizational learning is defined as the process where individuals learn in the conditions created by organization. According to Jerez - Gomez et al. organizational learning is a "dynamic process based on knowledge, which implies moving among the different levels of action, going from the individual to the group level, and then to the organizational level and back again" [37, p.716]. Moreover, they argued that learning capability is possible because of the collective conscience, which helps organization to work in achieving one common goal for everyone. This creates possibilities for generative learning which works for accumulating of knowledge which could be useful in the future. They identified four components of organizational learning capability: learning commitment; systems thinking; openness and experimentation; knowledge transfer and integration.

Because employees have knowledge, organizational learning capability related to human resource. From human resources management perspective, learning of individuals in the organization consists of human resources management systems which are aimed to develop individual competencies of the employees in the organization. These activities are divided into two characteristics: formal learning and informal learning. Formal learning is planned learning activities organized to develop knowledge of employees during working hours, for example, courses and trainings. Informal learning is unplanned activity which take place during performance of daily operations. Dubois created competency model where three different competencies of employee performance could be identified. There are job competencies, non-technical competencies and technical competencies. The competency model of employees is related to the implementation of formal and informal learning in the organization and have results in job performance. Thus, learning and competence development are related to individuals in the organization. The degree of involvement of each employee in learning processes result in competence development for the organization [38]. Organizational learning capability creates connection between organization and the external environment where the preconditions for new organizational knowledge exist.

Culture capability

Culture capability represents the capabilities of organizational culture. Organizational culture is the central element which supports integration and development of knowledge in the organization [39]. Organizational culture determine types of knowledge which are necessary for organization and which are related to activities inside the organization because organizational culture is represented in mission and vision of the organization. Organizational culture supports knowledge sharing in the organization. Thus, employees understandings of knowledge is related to the ability of top management of organization to shape knowledge sharing processes in the organization. Organizational culture consist of individual, team and organizational understanding of the importance of knowledge through sharing of the same values and beliefs. Because organizational culture creates trust among employees of the organization, the knowledge sharing process becomes easier and clear in the company. Wee and Chua stated that in SMEs the open culture and flat organizational structure develop knowledge sharing processes [40].

Organizational culture include openness, sociability, commitment to the organization [41]. Collectivity in the meaning of organizational culture where ideas, values, norms, rules, behavior and organizational practices are shared by each member of organization. The clan culture is characterized by relationship between human which represented in teamwork, sharing and empowerment. In this type of organizational culture employees are connected to each other, trust and share information openly inside the organization. Clan organizational culture stimulates participative decision-making process when employees feel themselves as a part of organization and relate to it. Another one is the adhocracy. It is the system which is characterized by flexibility, openness and innovation. This organization culture stimulates constant growth and change. Employees in this conditions are highly motivated and challenged to achieve the best results. The market organizational culture is characterized by market responsiveness, goal orientation and goal achievement. Because market culture organizations are dealing the best with the external environment, in this culture employees are driven by competition and external environment which is resulted in the organizational profit. Lastly, the hierarchy is the characterized by control, values and structure. In this kind of organizational culture everything is centralized, all decision-making process in the hand of the particular group of people. Employees work in accordance with standards, procedures and guidelines. This organizational culture lacks of openness and quick adaptability to the changes.

Because knowledge constantly changes it requires organizational culture which ready to adapt to changes easily. One of the peculiarity of culture in SMEs is in ability to shift culture easily because of the fewer employees and small teams compared to large organizations [42]. Moreover, cooperative climate has an impact on the desire to share and obtain knowledge in the organization. The willingness to share impact to the transformation of knowledge, ideas and creation of new knowledge. However, the trusting culture is the condition for the sharing to happen

in the organization. Supportive culture creates possibilities for learning process in the organization where employees are encouraged to share, learn, exchange knowledge. Three elements of organization culture which are organizational values based on Hofstede's cultural dimensions are individualism-collectivism (figure 6), uncertainty avoidance (figure 7) and power distance (figure 8). Individualism and collectivism represent the type of organizational culture which exists in the organization. The collectivism is dominant when organizational goals are more important than individual needs. Individualism is characterized by high level of personal value compared to collectivism where group achievements are more emphasized. Collectivism creates collaborative organizational culture where employees are willing to share knowledge and create new knowledge. Individualism is characterized by achieving individual goals and resisting sharing with the group. Thus, collectivism and individualism are the opposite conditions for the knowledge creation process where there is a confrontation between individual and organizational goals and values. Uncertainty avoidance shows how organization avoid uncertainties. When organization easily takes risks or chooses instability it represents the high level of the adaptability and willingness to create, obtain knowledge and low level of uncertainty avoidance. High level of uncertainty avoidance shows the structure in the organization, more routine and predictability in any activities. Low level of uncertainty avoidance is a key to sharing, exchange and transfer of knowledge in the organization. Power distance represent distribution of power and authority in the company. The low level of power distance makes process of knowledge sharing more easy because there is less barriers between employees of the organization. High level of power distance doesn't create possibilities for the development of new knowledge and doesn't support creativity in operations.

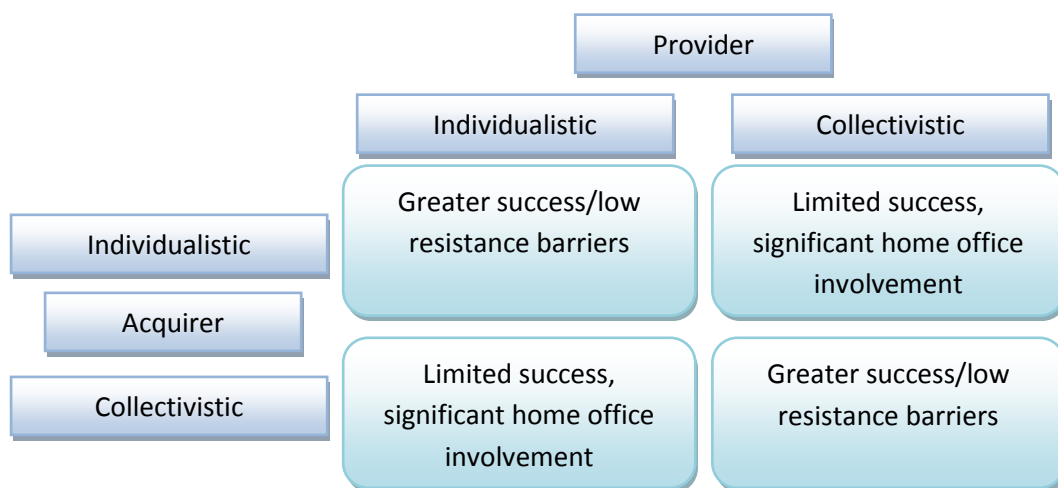


Figure 6 - Impact of individualism-collectivism on knowledge transfer

Note - Adapted from the literature source [43, p. 264]

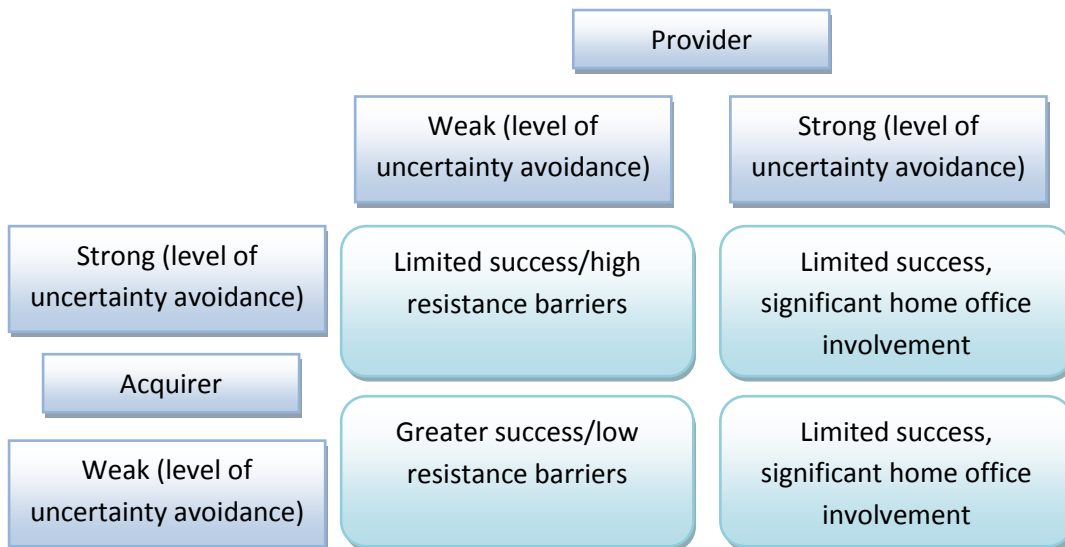


Figure 7 - Impact of uncertainty avoidance on knowledge transfer

Note - Adapted from the literature source [43, p. 269]

The ability of culture to stimulate employees to gain new knowledge, create, share and use them is the key and strategic role of culture capability. Moreover, trust and openness are main values that encourage employees. However, communication also related to the company's ability to promote these values.

Communication capability

Communication is a crucial element for the ability of the organization to ensure knowledge development.

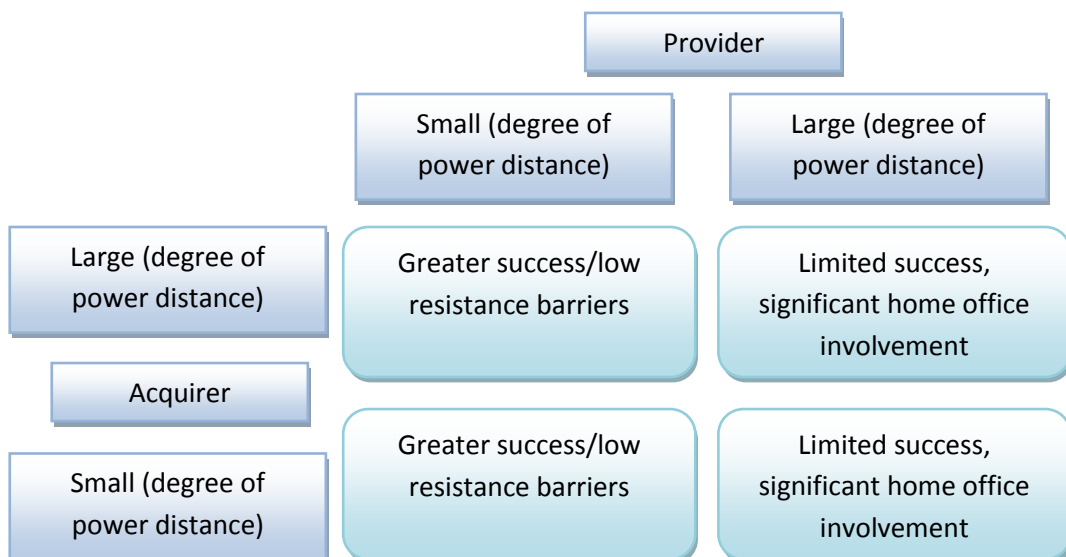


Figure 8 - Impact of power distance level on knowledge transfer

Note - Adapted from the literature source [43, p. 267]

Communication climate and communication network are considered as elements of communication capability in the organization. Communication climate is related to the atmosphere in the organization. It defines the level of the openness and readiness to share knowledge in the organization. Communication climate can positively influence the learning capability and quickly adapt to changes. Communication network is aimed to connect employees for making processes in the organization in accordance with the strategy. It creates possibilities for knowledge sharing in the organization and outside the organization. Networks play a crucial role in sustaining competition and allowing for the flow of knowledge to transfer between individuals. Strong communicating networks promote transfer of knowledge. While weak communication networks don't stimulate the sharing of knowledge between individuals. There are different types of networks such as expert, learning, knowledge-sharing and communities of practice. Communication capabilities also depend on technologies available in the company. Alavi and Leidner identified four contributions of information technologies (IT). IT helps organization share knowledge quickly and updates existing knowledge in organization. IT possess all available knowledge of organization and has a role as organizational memory. Everyone in organization has an access to knowledge and because of that knowledge sharing among individuals is simple process. Available organizational knowledge are accessible for everyone and any time. IT are expensive to use by small and medium sized enterprises but bigger companies usually invest in these systems. However, it is important to use IT to facilitate knowledge by creating environment to accept them.

Many authors identified that IT improves performance of knowledge management. It means that unique characteristics of IT has positive influence to ability of a company to manage knowledge. Because IT makes knowledge available to everyone in organization it helps to create new knowledge and innovations. Moreover, IT ensures that knowledge used efficiently and effectively in organization so that IT systems provides necessary conditions for easy use of knowledge. IT create environment for organization to develop knowledge management. Because all tacit knowledge of individuals transforms into explicit knowledge, organizations are benefit from this change. It permits organizations to exchange with tacit knowledge, transform it to explicit, use available knowledge to generate new knowledge. Moreover, information technologies provide organizations unlimited knowledge data which can be used in the future.

Innovation capability

Lawson and Samson defined innovation capability as an ability to transform inputs into products and processes for stakeholders [44]. Moreover, some authors define innovation capability into two types: radical and incremental. However, innovation capability means that company could be more adaptive which generates incremental innovations such as new products, services, processes. Therefore, considering both the structure as well as the ability to produce innovations are

crucial. Organizational structure creates conditions which stimulate knowledge development, generation of innovations.

The organizational structure is closely related to the organizational culture, as it creates the preconditions for the development of a culture within the company. The wrong organizational structure may create barriers and obstacles to knowledge management in the organization. Henry Mintzberg identified five types of organizational structure: machine bureaucracy, professional bureaucracy, divisional structure, simple structure and adhocracy.

Machine bureaucracy is the organizational structure that clearly separates responsibilities between employees, which ultimately creates a monitoring system at every level. This organizational structure makes the rules at all levels strictly, separate units and their responsibilities. Machine bureaucracy is extremely hierarchical structure, all power concentrated in the hands of top managers. Machine bureaucracy majorly is vertically centralized, however, little decentralization occurs because employees can make their own decisions. Machine bureaucracy heavily adapts to changes in the external environment, so for efficient knowledge management this organizational structure can be difficult. Machine bureaucracy does not allow the organization to innovate, therefore, for the effective management of knowledge, it is the non-preferred.

The professional bureaucracy focuses on the standardization of knowledge, creating an optimal allocation of responsibilities in accordance with the qualifications of workers. The professional bureaucracy is a horizontal organization with a clear allocation of responsibilities, where knowledge and skills play a key role. The main characteristic of this organizational structure is a democracy because power is in the hands of professional staff who can make decisions independently. The professional bureaucracy aimed to manage knowledge, because every employee has sufficient knowledge and has fewer barriers to the exchange of knowledge.

Divisional structure divides organization into divisions for operational purposes. In this structure, each unit is independently determined, but follow a common business strategy. At the same time, such structure is easy enough for knowledge transfer inside each unit. However, knowledge management does not become a common strategy for the entire company, because if in one unit knowledge is not effectively used it influences to whole organization.

The simple structure refers to the non-bureaucratic structures. Main features of simple structure are simple relationships and boundaries between departments. Simple structure is organic since it minimizes formal separation and all elements are interconnected. In this structure, power is concentrated in the hands of one person. Communications are characterized by informality and direct control. Since the power is centralized, while at the same time, there are no barriers at the operational level, it allows employees to make quick decisions and react to changes in the external environment.

The simple structure is the most common for new small businesses. However, this it is the most risky, because everything depends on one leader. The ability of a simple structure to respond quickly to adapt allows the company to use the

knowledge in accordance with the needs of the environment, and the lack of barriers allows employees to transfer knowledge between employees of the company more quickly and efficiently.

Adhocracy is a special structure that can bring together specialists from different areas in the team to achieve complex innovation. Adhocracy is characterized by low levels of formality, highly qualified staff with specialized knowledge and mutual coordination. For innovations this type of structure minimizes bureaucracy and avoids formalities. Adhocracy is based on the knowledge and skills of people, so existing knowledge is used to create new knowledge. In contrast to the professional structure, adhocracy avoids standardization, as it may affect the management of knowledge. Power in the adhocracy decentralized horizontally and vertically. Decision-making process is shared between managers depending on the task, which requires specific knowledge to a greater extent. Adhocracy is common in the dynamic and highly competitive environment, because it allows companies to generate and apply new knowledge in order to compete effectively in the market. Organizational structure plays a very important role in creating the conditions for the exchange of knowledge and effective management, introduction of changes. It allows the organization to determine what results you can expect and how you can change your position in the market. Businesses need to adapt its organizational structure to changes in the external environment that will allow them to quickly create new knowledge, innovation, and improve.

1.2 Evolution of the knowledge management theories

Knowledge management has been studied by many authors. They identified three era of knowledge management. The first era was before 1995. It was based on the structuring of the flow of information for decision-making and computerization, introduction of e-business software in the company. The second era began in 1995. Nonaka and Takeuchi presented a model of transformation implicit (tacit) and explicit (explicit) knowledge through 4 processes: socialization, externalization, combination and internalization [45]. The third era includes control of the flow of knowledge that focuses on the content and context of knowledge.

Evolution of knowledge management shows that the original function of knowledge, the concept of knowledge management tools and approaches to knowledge management have changed, as well as the skills necessary for knowledge management have transformed [46].

The first generation of knowledge management was based on the development of information technologies, including databases and repositories of knowledge and identifying company's knowledge assets. The second generation of knowledge management was oriented and focused on creation of knowledge, through different processes including sharing, exchange. The concepts of communities of practices and concept of ba were introduced at that time. The third generation of knowledge management aimed to generate new knowledge and create innovations.

There are three main schools of knowledge management [47]:

1. knowledge management is related only to information technologies
2. knowledge management is mostly related to human resources
3. concentrated on the capturing and evaluating company's know-how.

Several authors argued that knowledge management contributes to the development of organizational strategy. In this case, knowledge management system is developed. Ragab and Arisha defined knowledge management systems as "a managerial, technical and organizational system structured to support the implementation of KM within an organization" [48, p.7]. There are three approaches: codification, personalization and people-finder. Codification is related to making tacit knowledge available to everyone in organization by making it explicit. Personalization is about transfer of knowledge inside organization by communication channels between employees. It was proved that codification and personalization are positively influence innovativeness of an organization. People-finder approach identifies where knowledge exists in organization, who holds the knowledge. In this way, management of knowledge is aimed to create new knowledge in organization by helping to save existing knowledge and generating new through transfer, share and exchange.

Approaches to knowledge management system and knowledge management capabilities are related because successful knowledge management system incorporates knowledge management capabilities.

Knowledge management capabilities include knowledge management infrastructure and knowledge management processes. Each of these components has its levels. According to Gold et al. knowledge management process capability includes acquisition, conversion, application and protection of knowledge. Knowledge management infrastructure consists of technology, organizational culture and organizational structure. Many studies consider the possibilities of the process of knowledge and ability of the infrastructure of knowledge as two inseparable elements, the relationship between them affects the performance of the company, the implementation strategy and the success of knowledge management [49,50]. Process capabilities define the mechanisms of knowledge infrastructure which creates opportunities for knowledge environment that determines the effectiveness of the knowledge management.

Technology as an element of the knowledge management infrastructure consists of information technologies that enable the integration of existing knowledge to the organization to create, store and transfer new knowledge in the enterprise. Organizational culture is seen as a critical factor in building and strengthening the management of knowledge in the organization, which affects how employees acquire and share knowledge [51]. Organizational structure - is a systematic set of structural units combined in their degree of hierarchy, rules, functions, control and submission.

Studies by Nonaka and Takeuchi, Gold et al., Grant, Beveren identified that the transformation of the vertical organizational structure into more horizontal, less hierarchical is required for efficient creation and transfer of knowledge in the organization. Organizational structure may affect the ability of the process of

knowledge, as the internal organizational barriers may hinder the effective acquisition, conversion, application and protection of knowledge. Process capabilities of knowledge management require to use the knowledge management infrastructure capabilities. Knowledge acquisition aimed to identify and acquire knowledge, which required for sustainable development of organization in the future and is an integral part of ongoing operations. Protection of knowledge aimed at protecting the organizational knowledge through patents, copyrights and information technology. Companies can create an internal system of protection through limited access to organizational knowledge. Protection is a very important part of keeping knowledge within the organization because the drain of knowledge can critically affect the results of operations, the company's position in the market and the conditions of competition.

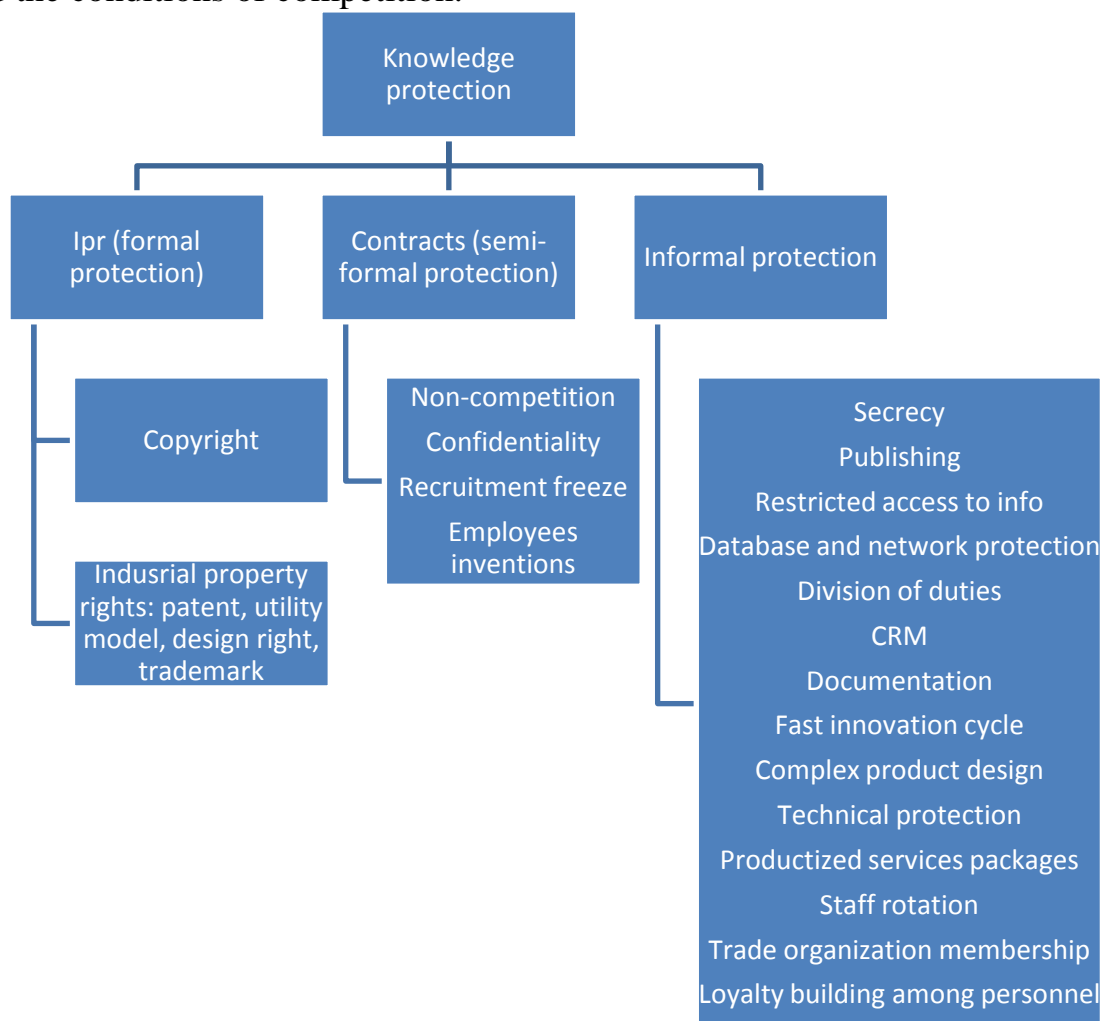


Figure 9 - Knowledge protection

Note - Adapted from the literature source [52]

According to Paallysaho and Kuusisto knowledge protection methods divided into three categories: ipr (formal protection), contracts (semi-formal protection) and informal protection (figure 9). They argued that companies often use different types of knowledge protection methods for achieving better protection. However,

depending on the industry where company operates preferred methods are also different as well as knowledge protection strategies. Moreover, the company's size also matter to the implemented knowledge protection methods, the bigger the company – the higher level of using formal protection methods.

Alavi proposed four knowledge management processes in organization: knowledge creation, knowledge storage and retrieval, knowledge distribution and knowledge application. Other knowledge management processes are knowledge sharing, knowledge transfer and knowledge exchange. Moorman and Miner argued that knowledge sharing is collective routines which related to distribution of learning inside organization, its individuals and units. According to Haas and Hansen knowledge sharing considered as an area with a very little research. Witherspoon et al. identified antecedents of knowledge sharing (figure 10).

However, the influence of tacitness of knowledge, trust, competition and limited absorptive capacity identified as elements which affect to knowledge sharing in organization. Knowledge sharing can happen in two cases. In the first process, provider and receiver exchange knowledge through personal communication.

The second method of knowledge sharing related to codified knowledge which already in written form. Moreover, these two types of knowledge sharing are connected two each other because they can't be mutually exclusive. However, knowledge sharing occur in any cases but with the different conditions (figure 11) .

According to Duffy sharing of knowledge depends on communications, multiple search techniques, classification schemes and transparent access to disparate data sources. Knowledge sharing inside members of teams is cooperative by its nature.

Intentions and Attitudes	Organizational Culture	Rewards to Knowledge sharing	Demographics
<ul style="list-style-type: none"> • Intention to share knowledge • Attitude towards knowledge sharing • Knowledge self-efficacy • Intrinsic knowledge sharing motivation 	<ul style="list-style-type: none"> • Communication • Participation • Subjective norm • Social trust • Organizational commitment • Social network • Support for knowledge sharing • Shared goals • Knowledge sharing resources and technology 	<ul style="list-style-type: none"> • Anticipated pay increase/promotion • Anticipated reciprocal relationships • Reputation building 	<ul style="list-style-type: none"> • Gender

Figure 10 - Antecedents of knowledge sharing

Note - Adapted from the literature source [53]

According to Ghobadi et al. the unique characteristics of knowledge can influence to the difficulties such as hoarding or incomplete knowledge sharing between individuals in the organization [54].

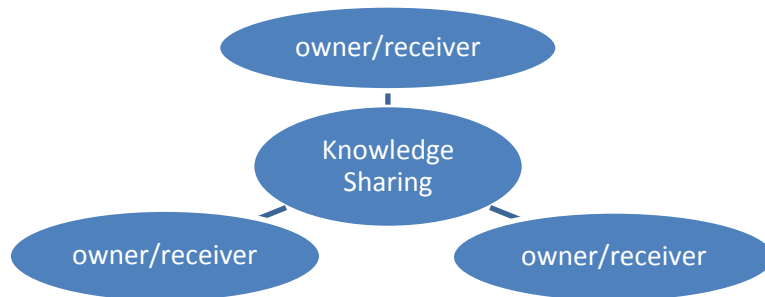


Figure 11 - Knowledge sharing

Note - Compiled by the author

However, cross-functional cooperation and cross-functional competition have an impact on knowledge sharing processes. Cross-functional cooperation stimulates knowledge sharing knowledge because employees perceive knowledge as a collective and shared between individuals in the teams. Cross-functional competition can prevent knowledge sharing because employees perceive it as their individual advantage to compete with other members of the team.

Knowledge exchange is an exchange of skills, knowledge between owner of knowledge and recipient of knowledge and vice versa (figure 12). In this case knowledge exchanged between the owner of knowledge and recipient, then, the recipient acts as an owner of knowledge and it exchanges with previous owner who now is the recipient of knowledge through exchange process.

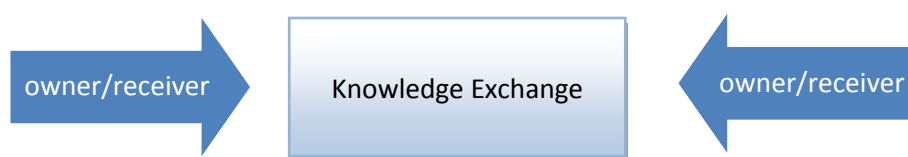


Figure 12 - Knowledge exchange

Note - Compiled by the author

Some authors consider that knowledge transfer and knowledge sharing have the same meaning. However, knowledge sharing is different from knowledge transfer. Knowledge transfer is the process of sending knowledge from owner or individual who possess it to recipient while knowledge sharing is about obtaining knowledge from common source where it doesn't matter if you are owner or recipient of knowledge (figure 13). Because tacit knowledge is complex by its

nature, transfer of it will always require additional skills and social know-how from owner.

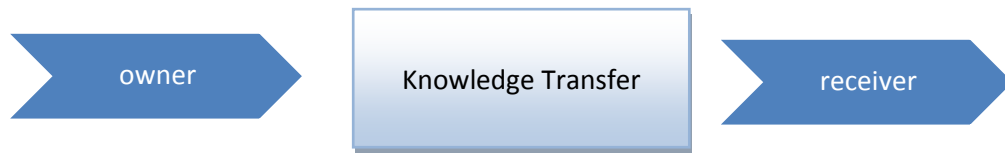


Figure 13 - Knowledge transfer

Note - Compiled by the author

Dixon identified 5 types of knowledge transfer [55,p.169]:

- Serial transfer: the knowledge a team has learned from doing its task that can be transferred the next time that particular team does the same task in different setting.

- Near transfer: the explicit knowledge a team has gained from doing a frequent and repeated task that an organization would like to replicate in different teams doing very similar work.

- Far transfer: the tacit knowledge a team has gained from doing a non-routine task that the organization would like to make available to other teams that are doing similar work in another part of organization.

- Strategic transfer: the collective knowledge a team needs to accomplish a strategic task that occurs infrequently but is of critical importance to the whole organization.

- Expert transfer: the technical knowledge a team needs is beyond the scope of its own knowledge but can be found in the special expertise of others in the organization.

Researchers in the area of knowledge management developed several models (table 2).

Table 2 - Knowledge management models

Model Name	Main idea
Nonaka and Takeuchi (1995)	Socialization, externalization, combination, internalization
Wiig Model (1993)	build, hold, pool and apply
Meyer and Zack (1999)	Acquisition, storage/retrieval, distribution, presentation/use, refinement
Bukowitz and Williams (1999)	Get, build/sustain, contribute, assess and divest
McElroy KM cycle (2003)	Claim and integration
Dalkir (2005)	Create and capture, assess, share and disseminate, contextualize, acquisition and application, update
Source - compiled by the author based on [56]	

Knowledge creation model (1995)

Japanese researchers in knowledge management area Ikudzhiro Nonaka and Hirotaka Takeuchi proposed the main theoretical framework for understanding how organizational knowledge is created, converted and transferred to the organization [57]. Tacit knowledge - it is all the knowledge that cannot be outsourced, and be expressed on paper and other material forms. These include cognitive knowledge (principles, intuition, etc.) and technical skills (know-how, etc.). Explicit knowledge is all the knowledge documented and others in organization have access to them. For example, reports, manuals, strategy. Explicit knowledge without tacit does not carry meaning, because they cannot be used without tacit knowledge [58]. Knowledge may become explicit and tacit in time, but some knowledge cannot be converted into explicit.

Knowledge of individuals is a tacit knowledge, knowledge of organization is largely dominated by explicit knowledge. Organizational knowledge is the main goal of knowledge management of the company, its competitors, customers and operations. They have introduced SECI model (figure 14) which shows how knowledge can be generated in the processes [59].

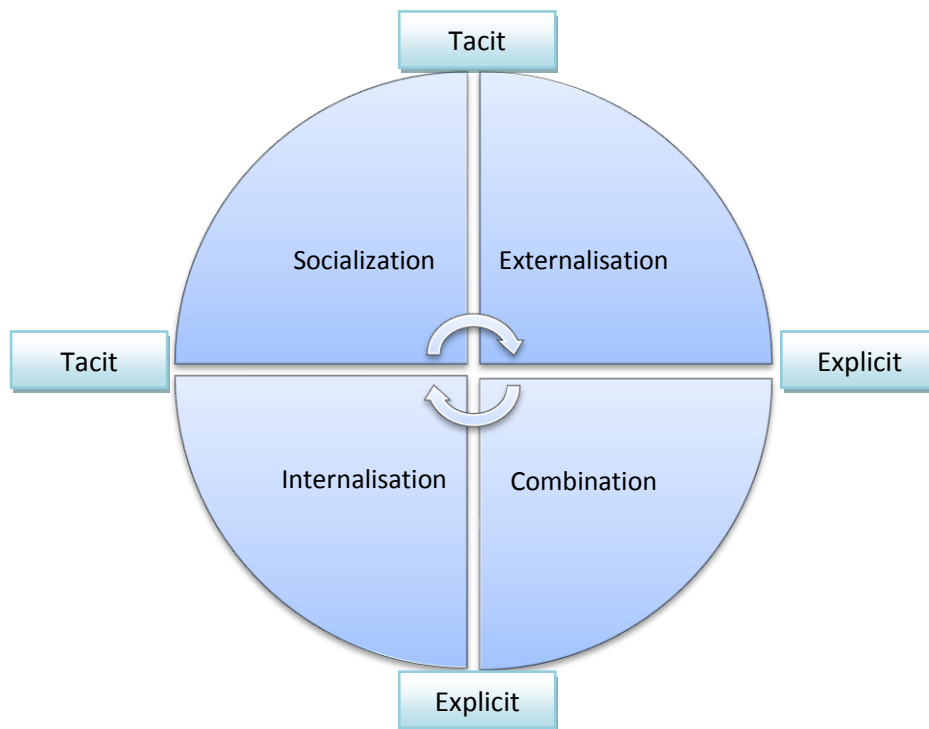


Figure 14 - SECI model

Note - Adapted from the literature source [45, p.62]

Nonaka noted that for a rational process of knowledge creation is needed "ba" or general conditions. "Ba" is essential in the creation of knowledge and also in its improvement. There are two types of interaction. Type 1 - how to interact: either

individually or collectively. Type 2 is characterized by personal contact or through the virtual letters, books, manuals, etc. There are 4 types of ba: creating ba, binding ba, systematizing and exercising ba (figure 15).

First, creating ba is a place or environment that provides conditions for interaction between individuals on a personal contact for the exchange of experiences, ideas, feelings, which are important elements in the exchange of tacit knowledge. Trust and commitment form the basis for the transfer of knowledge between individuals. Second, binding ba - a place where there are collective and individual contacts, during which there is an exchange of knowledge, experiences, which creates conditions for externalization. Third, systematizing ba is a place that provides the conditions for the existing explicit knowledge to be easily transferred through the internal information systems, data warehousing, documentation. Fourth, exercising ba - a place where personal and virtual contacts facilitate the production of tacit knowledge through communication that is internalization.

Similarly to Nonaka, Davenport and Prusak argued that knowledge transfer as well as knowledge generation, codification and coordination are important areas in knowledge management.

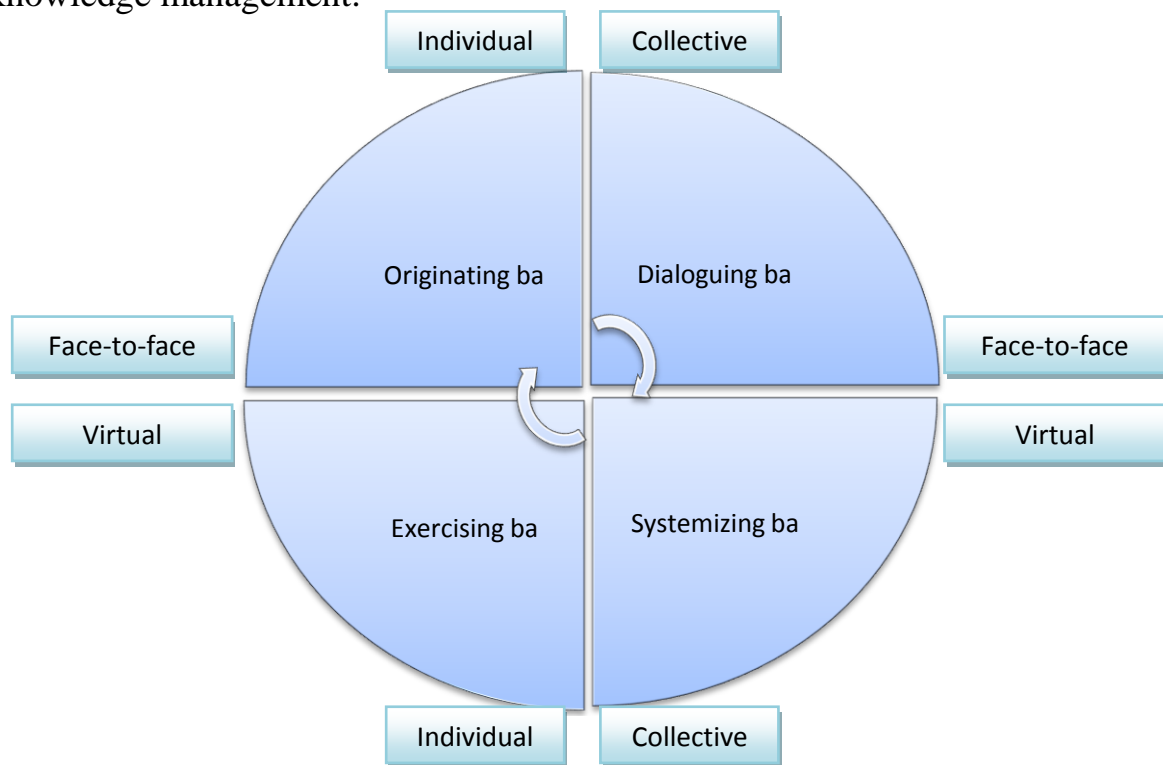


Figure 15 - Ba and types of interactions

Note - Adapted from the literature source [57, p.16]

Knowledge generation is knowledge generated through social processes inside the company between individuals, access to explicit knowledge. Codification and coordination helps to identify where knowledge in the company is located, who has an access and how coordination process can influence to the flow of knowledge. Knowledge transfer allows individuals to create new knowledge or new

perspectives, solve current organizational issues. These authors proposed five ways of knowledge generation in organization: acquisition, dedicated resources, fusion, adaptation and networking. Acquisition of knowledge happens from external environment, different organizations, stakeholders. Dedicated resources is the use of organizational resources for knowledge generation. Fusion defined as a creation of conditions to create synergy. Adaptation is the possibility for more creative environment generated by changes of the external environment. Networking is about self-organized networks of people called communities of practice.

Wiig model (1993)

Wiig was one of the first researchers who identified knowledge management process. His model has four stages: build, hold, pool and apply [60]. These stages are applicable to individual, group or organizational levels. Build - the process of obtaining, codifying, analyzing and organizing of knowledge. Hold - the process of accumulating, embedding and archiving of knowledge. Pool - the process of coordinating, accessing and retrieving of knowledge. Apply - the process of using of existing knowledge.

Meyer and Zack Knowledge Management Cycle (1999)

Meyer and Zack introduced the term "information" to the knowledge management processes. They argued that there are five stages in the information (knowledge) process: acquisition, refinement, storage, distribution and use [61]. Acquisition is the obtainment of data from different resources. Refinement is the reorganization, structuring and standardizing of information. Storage represented by the use of both digital and physical repositories. Distribution is the delivery of information through different channels. Use is related to the use of information in daily operations to achieve organizational goals.

The Bukowitz and Williams Cycle (2000)

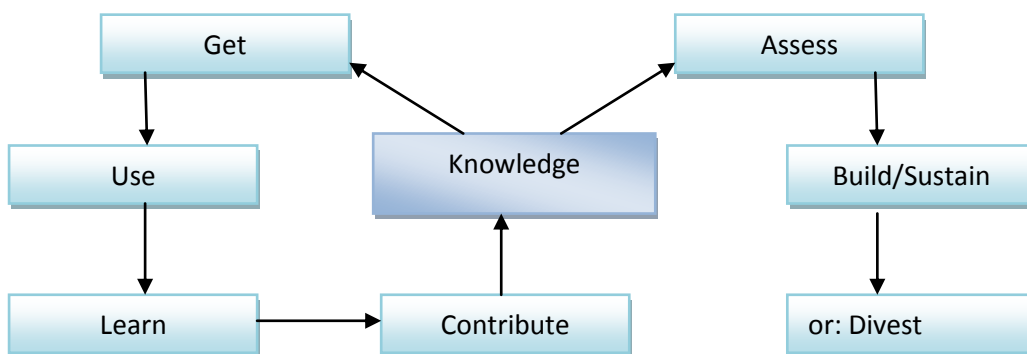


Figure 16 - Bukowitz and Williams Cycle

Note - Adapted from the literature source [56, p.39]

Bukowitz and Williams introduced knowledge cycle in 2000. This cycle has several new stages which were firstly added to knowledge management model. The main idea of this cycle is that learning helps to apply knowledge in new and

innovative way while before use was the last stage (figure 16). Moreover, sustainment means that knowledge should be kept inside the company and it will always be valid if it is valuable or divested. Get is the obtainment of required information for organization. Use is the application of new information in organizational processes. Learn - gaining of new knowledge. Contribute means learned knowledge available to everyone in the organization. Assess is the identification of knowledge (intellectual or corporate asset) which would be useful in the future. Build/sustain is the creation of new intellectual asset which company doesn't have now and keeping it. Divest means not keeping unnecessary assets.

McElroy KM cycle (2003)

McElroy's knowledge management cycle consists of several crucial elements: knowledge production, organizational knowledge, knowledge integration, and distributed organizational knowledge base, business-processing environment which are supporting three key elements and enable the update of knowledge in organization [62]. He states that knowledge base of the company is formed in minds of individuals, groups and also explicitly.

Dalkir's integrated knowledge management cycle (2005)

Dalkir classifies knowledge into three categories: "knowledge capture and/or creation, knowledge sharing and dissemination, knowledge acquisition and application" [56, p.54]. Moreover, the processes like assessment, contextualization and update are able to integrate all three categories for continuous development. Knowledge management approaches discussed in this chapter are predeterminants for understanding of knowledge competence which occurs based on organizational knowledge. Processes related to knowledge development in the organization are discussed. However, knowledge management cycles greatly depend on the external environment of the organization.

1.3 The development of knowledge competence theories

Resource-based view of the firm

One of the most important theories knowledge competence is based on a resource-based view of the firm. The relationship between resource-based view of the firm and knowledge competence is represented in the importance of competition for the organization. Resources create competences therefore the role of competences and resource-based view of the firm linked and depends on transformation of those resources into competences. Thus, knowledge competence comes from organizational resources.

Penrose recognized the importance of this theory by stressing that firm's growth primarily depend on its resources. The right use of resources can bring benefits to the organization. Moreover, she argued that skills and routines constitute resources and learning helps organization accumulate skills and routines [63]. In this case the importance of managers who possess qualities that are inimitable. Penrose's perspective on competitive advantage related to the core capabilities or technological bases which influence to the position of the company. The main

contribution of Penrose to the resource-based view of the firm is in defining the key role of experience and skills.

Several authors gave different definitions to resources. Wernerfelt defined resources as something that is attached to the company, while Prahalad and Hamel defined resources as core competencies. There are three possible ways when core competencies can be useful for organization. Core competencies can provide access to different markets. It gives diversification opportunities for company. Core competencies can enhance distinctive competences. It means organization can have unique features which makes it different from competitors and helped to create a niche on the market. Core competencies which are difficult to imitate aimed for creating competitive advantage for a longer period and transforming it to sustainable competitive advantage.

According to Grant resources classified as tangible, intangible and personnel-based [64]. Tangible resources are financial and physical resources. Intangible resources are technologies, human resources of the organization. Personnel-based resources include employees skills, expertise, training. According to resource-based view of the firm resources also can be divided into three categories: physical capital resources (technologies, equipment, materials), human capital resources (employees, their training and experience) and organizational capital resources (formal and informal relationships between employees). These classifications of resources show the importance of all organizational resources and their impact on achieving competitive advantage. According to Barney organization which has valuable, rare, imperfectly imitable and non-substitutable resources and capabilities will gain competitive advantage [65]. Barney's perspective on competitive advantage and performance depend on the resources and capabilities (figure 17). Valuable and rare resources and capabilities create competitive advantage which lead to improvement of performance. However, additionally inimitability and non-substitutability of resources and capabilities create sustainable competitive advantage and sustained performance.

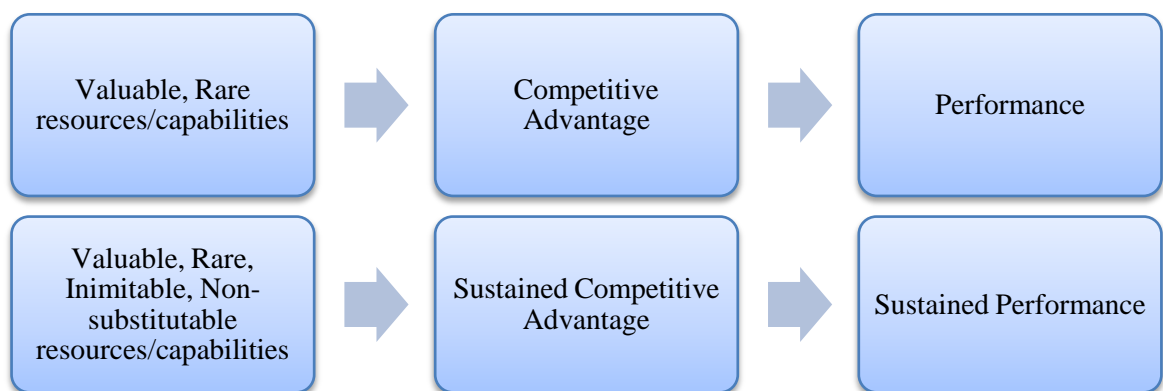


Figure 17 - Barney's conceptual model

Note - Adapted from the literature source [66]

According to Barney it is important for organization to know how to use its resources. Moreover, it will help to achieve sustainable competitive advantage.

Organizational resources have an influence on organizational strategy. Barney argued that value of the resource or capability enables organization achieve sizable competitive advantage. The less companies possess certain capabilities or resources the less is competitive environment and it allows organization to achieve competitive advantage easier. Moreover, organizational structure, control system and compensation policies positively affect to application of resources and capabilities. They help to utilize resources in accordance with the organizational strategy.

The concept of distinctive capabilities or competences is also related to the resource-based view of the firm. Distinctive competences are the competences that set a firm apart from other firms. It means they are different from others and have some specific or unique characteristics. It was identified that there are three main resources which ensure uniqueness of distinctive capabilities: structure of a market which limits entries, company's history and relationship between company and stakeholders. That means companies are more likely to use existing distinctive capabilities rather than creating new one because three characteristics guarantee that organization already has distinctive capabilities. Thus, organizations have core competences or capabilities which are main for organization's operation and enable to generate new products or services.

Moreover, Leonard-Barton identified that core capabilities provide competitive advantage [67]. They include skills and necessary action that transforms it into competitive advantage. Kogut and Zander defined combinative capabilities which are related to internal and external learning in the organization and create new opportunities for organization.

Teece et al. introduced important work in the area of resource-based view of the firm. They proposed dynamic capabilities perspective which explains "how combinations of competences and resources can be developed, deployed, and protected" [68, p.510]. They defined dynamic capabilities as "firms ability to integrate, build and reconfigure internal and external competencies/capabilities in the face of a rapidly changing environment" [68,p.516]. Because resources can be easily obtained and strategically developed in both cases. However, changing environment stimulate organizations to reconfigure existing resources and capabilities and initiate changes in different areas such as technological change. These influences company's ability to compete and introduce new resources and capabilities which are different from its competitors and at the same time rare, valuable, imperfectly imitable and non-substitutable. Thus, dynamic capabilities perspective allows organization to obtain new resources and improve position compared to its competitors.

Knowledge in the context of resource-based view have several characteristics that describe it: valuable, rare, imperfectly inimitable and non-substitutable. Valuable knowledge means that knowledge contribute to the development of competitive advantage, and is able to obtain new knowledge. Rare means that organizational culture, employees' knowledge are rare as well as know-how, know-what and know-why. Imperfectly inimitable means that accumulated

experience of company which is in culture of the organization, its history and experiences makes behavior of individuals different all the time. Non-substitutable means that company's knowledge which created distinctive competencies is not possible to substitute.

Contribution of Barney to the field of resource-based view of the firm is influential because he defined criteria for resources which can be useful for organization in long-term perspective. Additionally, Grant defined what kind of resources do exist in the organization. This classification of resources helps organization to categorize and obtain required resources and stimulate the development of the more specific. With the different categories of resources, organization can develop certain areas which will help to create valuable, rare, imperfectly imitable and non-substitutable resources. Moreover, all resources have an impact to the organization's strategy development and daily operations. According to Wright et al. human capital plays important role in organization. Thus, all resources of the organization are used by employees and it is the role of managers to use specific resources to achieve specific goals. However, the category of resources which include intangible assets is much more complex than tangible assets, because it is influenced by different factors related to human capital. Barney's conceptual model greatly shows dependence between organizational resources, company performance, and competitive advantage. The more valuable, rare, imperfectly imitable and non-substitutable resources organization obtains, the easier it becomes to use them. However, many studies related to resource-based view of the firm highlighted the role of managers in organization. Moreover, conditions inside organization are also influential. In studies by Barney, strategic planning, information processing systems and positive reputations affect sustained competitive advantage of the company. At the same time, they ensure the success of resources in organization. However, resource-based view of the firm doesn't suggest how organization should obtain resources. All resources need to be developed internally in organization. However, it takes longer to develop those resources but at the end they bring more value and have a greater impact for company's development.

Different companies have different strategic resources which are aimed to deliver competitive advantage of a company. Because of market changes, resources of organization also need to be changed. This is dynamic capabilities perspective. It is related to changes of resources with the changes in the environment.

Organizations achieving competitive advantage through available resources and aiming to gain sustainable competitive advantage have to use dynamic capabilities perspective because it ensures that resources of organizations can bring organizational development with the changes of the environment and can be transformed to do so.

However, resource-based view doesn't limit organization in the type of resources which it should maximize and gain because any of those can be used for strategic development of a company. The main concern is in constant process of development of resources and their unique characteristics because organizations are

more likely to lose them quickly with the changes in the market including development and increasing number of competitors.

Thus, resource-based view of a firm provides broad perspective for further organizational development. Companies need to clearly identify the most efficient and effective ways to use already available resources and develop strategy in accordance with that. The most appropriate strategy is the one which helps organizations to survive on the market and fully use its resources. The concept of knowledge competence fits into organizational use and application of existing knowledge and creating value by obtaining new which altogether become a source for the development.

Competence-based view of the firm

Competence-based view of the firm emerged in 1990s. Research by Sanchez, Heene and Thomas introduced competence-based strategic management [69]. However, the research in competence-based view of the firm majorly related to Barney types of resources which are scarce and valuable. Competence-based view of the firm is connected to the concept of competitiveness. The concept of competence and competitiveness connected to company's ability to achieve competitive advantage by using competencies which exist in organization. However, theoretically competitiveness doesn't always ensure existence of competitive advantage in the organization. According to Peteraf competitive advantage is related to competences and depends on 4 conditions which resources and competences have to meet: they have to be heterogeneous form of the competences of competitors; there have to be forces that ex post limit the competition and protect from imitation and substitution; the competence and resources must be imperfectly transferable and hence controlled by the company; there must be ex ante limits to competition expressed in different expectations about the future value of resources and competence [70,p.44]. Freiling defined that competence-based view of the firm is "dynamic, focused upon delivering a theory of the uniqueness of the firm, oriented towards explaining both transaction and transformation costs and benefits, delivering and explanation which is at least partly independent from opportunism and the contractual point of view" [17, p.34]). He identified competence-based contributions to a theory of the firm (table 3).

According to Schmiedinger et al. human competence is a mix of explicit and tacit abilities, and at the same time it is skills that are stimulated and developed under needs, personal goals, values, attitudes and standards. However, competence-based view of the firm considers competence as collective. They defined organizational competence as a mix of human competence and physical resources which are used by individuals to contribute to organizational performance. In his model competence has four levels: elementary (human perspective), passive (organizational perspective), active (organizational perspective), learn and adaptation loop [71]. Elementary level refers to individual human competence. At this level individual competence is presented by the mix of explicit and implicit knowledge and motivation to share these skills and knowledge in organization. Passive level refers to all resources of organization which are currently not used to

bring value to organization. Active level competences are used in organization to bring value. Active competencies are interrelated to processes in the organization. Learn and adaptation loop is essential for constant update of resources and competences. Because resources need constant update the concept of organizational learning can be used to creation of new competences. According to Drejer competence consists of four elements: technology, human beings, organization and culture [72]. Technologies are tools employees use in activities including tools, equipment, software, databases. Human beings are people and they are the most important for company's development. Organization consists of the managerial systems such as planning, payment system, communication channels etc. Culture represents norms and values which exist in the organization. These elements are interrelated to each other and create a system for organizational competence. Hamel and Prahalad identified two methods which help organization to obtain resources: development of the pre-existing resource portfolio (intra-organization competence development); development of a resources portfolio through the introduction of new resources from external resources (inter-organizational competence development) [73].

Table 3 - Competence-based contribution to a theory of the firm

Questions of a theory of the firm	Competence-based point of view
Emergence of the (multi-person) firm	<ul style="list-style-type: none"> - explaining not only the firm in general but also the uniqueness of the single firm - higher order organizing principles of the firm due to outpacing factors - higher order organizing principles of the firm due to protection forces creating semi-permeable boundaries
Development and breakdown of firms	<ul style="list-style-type: none"> -changes caused by: cooperative resources transaction processes: integrating firm-addressable resources, transferring firm-specific resources; participating in market processes with customers (including both transaction and according transformation); learning in the market and adapting the firm's system elements. - breakdown in case of: inability to prove oneself in market processes and/or; inability to withstand threats caused by competitors respectively the business environment.
Kind of boundaries	<ul style="list-style-type: none"> -open boundaries -principle of semi-permeability
“Horizontal boundaries” of the firm (business scope)	<ul style="list-style-type: none"> depending on: -the availability of critical resources and competence as to a given application (avoidance of resources and competence gaps in competition); - the effective use of an available resources and competence endowment (synergies, relatedness); -resources refinement paths and corresponding

	business opportunities
“Vertical boundaries” of the firm (vertical integration)	depending on: -existing relations to external parties; -the relative resource/competence position in competition; -lock ins/lock outs
Internal organization of the firm	dependent on conditions of the external environment of the firm: -characterized by system elements according to the open system view; -core element of internal organization: routines, rules, norms, values, culture
Source - Adapted from source [17, p.48]	

These methods are aimed to accumulate new competences in organization for its future development. However, the role of organization’s networks becomes important in these methods. Depending on the inter-organizational processes collaboration between companies differs. Moreover, these activities help organization to get access to competences from different industries as well. According to Awuah organizations can develop competences through network of exchange relationships (figure 18).

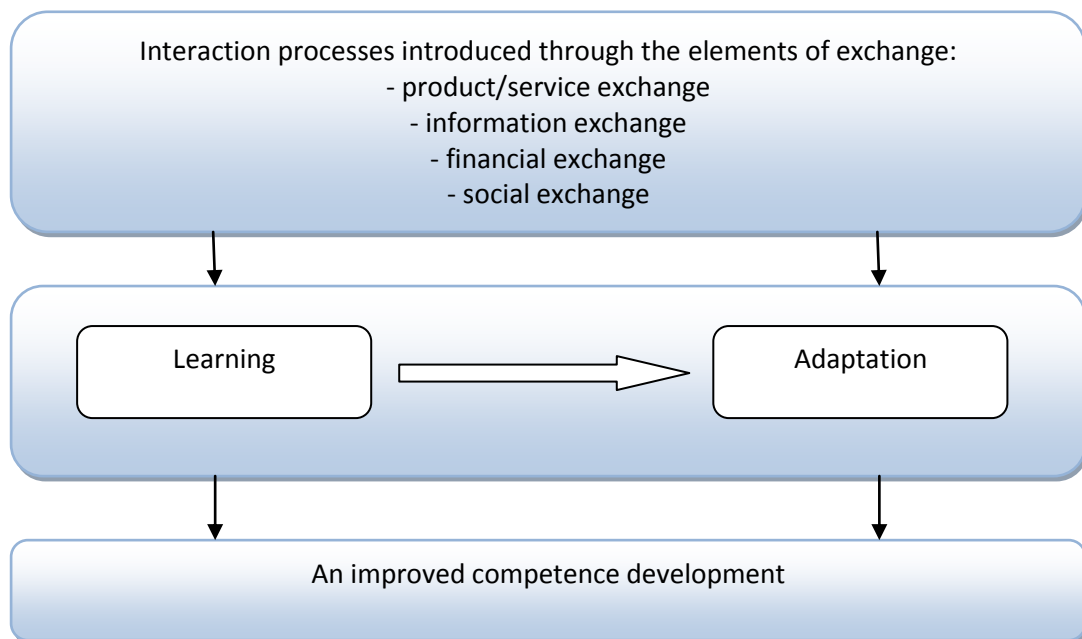


Figure 18 - Competence development through a network of exchange relationships

Note - Adapted from the literature source [74, p. 78]

The competence-based view of the firm is connected with company’s ability to manage existing competences which are aimed to bring competitive advantage.

According to Sanchez et al. competence-based view is used by the companies to achieve organizational goals. One of the key aspects for the development of organizational competence is transforming knowledge through learning process in the organization. Because competence resides in individuals and groups of individuals the process of accumulated knowledge occurs in any organization.

To conclude, knowledge competence and competence-based theory of the firm are interconnected in the role of knowledge as a competence in organization and it can bring benefits for company's long-term development.

Knowledge-based view of the firm

Many authors argue that knowledge-based theory is related to resource-based view. The knowledge-based view of the firm identifies knowledge as an important resource of the organization. Curado and Bontis argued that in knowledge-based view of the firm organizations concentrate on organizational learning, management of tacit and explicit knowledge, and development of competencies. In this theory strategic role of knowledge helps organization to achieve competitive advantage. According to Grant organization viewed as an "institution for integrating knowledge" where it creates knowledge for organization [75, p.109]. Dierickx and Cool identified that knowledge as an asset which influences company's differentiation and competitive advantage. Knowledge-based view of the firm argues that transferability of knowledge is important. Depending on the type of knowledge, transferability inside organization, between individuals and outside organization differs. Kogut and Zander argued that tacit knowledge is applied, acquired and transfer more slowly than explicit knowledge. However, communication crucial for explicit knowledge. Acquisition and creation of organizational knowledge is the main difference of knowledge-based view of the firm. From this perspective, obtainment of new knowledge becomes important for organization. Simon identified the crucial role of individuals in knowledge creating and storing process. Moreover, he identified that learning is important to obtain new knowledge. Organization can obtain knowledge in two ways: learning from existing members and acquiring new members with knowledge which current members don't have. The concept of learning in relationship to organization was studied by several researchers. According to Levitt and March individuals in the organization can learn from their own experience or from each other's experience. Knowledge-based theory suggests that organizational processes and routines which are constantly performed lead to organizational knowledge [76]. Nelson and Winter argued that because tacit and explicit knowledge depend on the external environment and can be stored in routines in organization, in long-term constant improvement and development of existing knowledge lead to better performance of the organization [77]. Spender argued that "the firm has an ability to know independently of its employees, or at least independently of their conscious reasoning" [78, p.51]. Thus, individual knowledge possess value for the organization. Moreover, research in the area of organizational knowledge

emphasized the role of company in acquisition, processing, storage and application of knowledge.

From knowledge-based perspective organization has three important elements: external structure, internal structure and individual competence [79]. Those elements are related to customers, suppliers, brand, patents, systems inside organization. External structure is about relationship with customers and external environment. Internal structure is about internal assets created by individuals which belong to organization [80]. Individual competence is about employees competence and skills in different areas of organization. Because knowledge can be missed it is important to encourage employees to share their knowledge with others in company. Knowledge transfer from individuals to external structure is about relationship between employees and stakeholders.

One of the most important features of knowledge as a resource of organization is that it changes constantly because every day knowledge-holders deal with stakeholders of organization, external and internal environment and those interactions are changing and transforming knowledge of an organization for future development. All divisions of organization belong to these processes and have own impact. The main point of knowledge-based view is how organization can use and gain knowledge as a resource inside the organization.

Knowledge-based view doesn't explain how knowledge should be used to make it always a resource for sustainable competitive advantage. Without the "knowledge" of how to profitably use a resource, it is not a resource, it has no value. Resources without knowledge have no meaning" [81,p.71]. Knowledge as a resource has all tacit and explicit knowledge of an organization and it's difficult to imitate or copy it because it is related to employees of a company. In such kind of organizations the role of individuals is crucial. They use, transform and create knowledge for achieving competitive advantage of a company. Knowledge competence and knowledge-based view of the firm mainly related in terms of strategic influence of knowledge. Therefore, knowledge competence can lead to organizational developments.

Endogenous macroeconomic growth theory

Endogenous growth theory assumes that economic growth of the country purely depends on the internal decisions and is forced by human capital. In this context, the role of individuals and their knowledge has a dramatic difference and impact on company, and a country. This theory emphasized the importance of labour and knowledge capital. In more broader context, the role of innovations and development of knowledge are closely linked and knowledge capital involvement in various activities is highlighted. According to Romer technological change is very important in ensuring the transfer of new knowledge to tangible goods and outputs of companies' activities [82]. In this theory ideas developed by people lead to the final goods and services. Therefore, exploration of those ideas is crucial.

Endogenous growth theory assumes that role of R&D and investments in education create more possibilities for knowledge development and as a result positively affects economic changes. R&D, technology transfer create long-term

changes that are able to sustain and support economic development. In this theory, the role of knowledge has a greater scale of impact. Because of that the role of government and its policies to boost growth has special focus. In accordance with the theory, support and favorable conditions for business are able to generate more knowledge and have positive changes for knowledge spillovers. Knowledge spillovers are aimed to boost and continuously stimulate knowledge creation and accumulation. This cannot be done without human capital and skilled labor force. Therefore, economic development of country is directly linked with these factors that are aimed to stimulate economic development through generation of innovations and technological advancement.

In relation to knowledge competence, endogenous growth theory supports knowledge and its key role in organization. The dependence on internal environment to stimulate organizational development leads to better and more complex and unified structural changes in approaching knowledge competence development on different levels. In this context, the role of government and interactions with external environment to obtain new knowledge becomes crucial. Within interactions, organizations are able to accumulate more knowledge which is relevant as it represents environment where company is operation. Accumulation of knowledge becomes one of the important conditions for constant generation of competencies and its implementation in organization's activities to improve company's performance.

Summary for the first chapter

This chapter discusses theoretical aspects related to knowledge competence in organizations. Literature review showed the specific differences of knowledge, competence and knowledge management. Strategic role of knowledge in organizational context analyzed by many authors was able to create the new field in management - knowledge management.

Mentioned knowledge management theories explain the process of knowledge creation and use in organizational environment. The resource-based view, knowledge based-view and competence-based view of the firm determine the role of knowledge in the organizational context, and specifically, knowledge as an organizational competence.

The peculiarities of organizational resources are discussed in order to provide the deeper understandings of knowledge. The literature on knowledge identified the complexity of the nature of knowledge inside organizational context, in terms of the purpose it serves and the role it has inside the company.

The definition of knowledge assets, knowledge capabilities explain the essential meaning of knowledge competence. Knowledge competence in organizational setting acts as a capability for company's development of knowledge in various fields. Therefore, ability of company to use knowledge competence can stimulate the changes in the performance of organization.

It was proven by several authors that knowledge itself cannot exist in organization. Therefore, the conditions for knowledge development in organization

are capabilities of the company which enables to exploit knowledge as an organizational resource. Definition of knowledge competence identifies its role in organization, its value to any company and strategic importance to organization.

Theories related to knowledge competence create an understanding of ability of knowledge to affect any process in company. Knowledge is a unique asset for the company. Although, its capabilities are essential for its discover and use in the organization. Identified four types of knowledge capabilities: learning capability, culture capability, communication capability and innovation capability creates possibilities for company's use of knowledge assets available in organization.

Nowadays, highly competitive environment makes knowledge as an only source for creation of company's competitive advantage. In order to make knowledge a source for that, companies should find alternatives how to use obtained knowledge. Knowledge competence is aimed to help organization to exploit its knowledge. Therefore, the strategic role of knowledge in organizations makes knowledge competence very important for company's long - term development.

2 AN ANALYSIS OF KNOWLEDGE COMPETENCE AND COMPANY PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES

2.1 Assessment of external factors of business development of SMEs in Kazakhstan

Companies are greatly influenced by the external factors which influence their activities on the market. Variety of the factors determine different aspects which potentially can have a positive or a negative influence on organization. Market conditions which are created by the political environment, macroeconomic environment, legal environment are also contributing to the SMEs development.

Environmental uncertainty is a factor which affects strategic development and decision processes in a company [83]. Moreover, uncertainty could be studied in terms of individual's perceived inability to predict, evaluate the changes in the environment and how company would deal with them. Uncertainty of the environment means unpredictability and instability of the environment related to company. The uncertainty of the external environment of the company is defined by the information available to the company about key factors related to a particular industry company operates. Inaccuracy in information creates more uncertainty for company and requires constant assessment of the external environment to gather reliable information. Several studies indentified that environmental uncertainty affects firm performance. The environmental uncertainty could be studied as firm specific or market based. Firm specific uncertainty is created because of the effect of different sources that are unique and related to the internal environment of the firm. Firm specific uncertainty is minimized by company's attempts to gain more knowledge about environment and use it as a way to minimize negative impact. This type of uncertainty helps companies to create more links and network with other organizations. There are several factors influencing environment: economical, political, socio-cultural, technological, legal and ecological factors. Economic forces are factors creating macroeconomic environment of the company and economically influence company's financial position. Economic factors are determined by the development of country economy and the characteristics of the market mechanisms. For example, purchasing power depends on the level of current income, prices, savings, and credit availability. The main factors of this environment include: growth and decline in industrial production, the level and the rate of inflation, taxation. When there is growth in the economy, increased consumer spending increase competitive pressure on the organization. Therefore, decrease in the rate of economic growth affects the consumer spending and threaten the profitability of the organization.

Political factors define the political stability and other factors related to political forces. Political and legal factors are represented by public authorities and the competing parties and groups. State and market conditions are complex and in this case political factors characterize the level of stability of the political situation, the content of government programs and the programs of leading political parties and groupings. Political and legal factors are the following: changes in the tax law,

the relationship between business and government, environmental legislation, monetary policy, government regulation, the government relations with foreign states countries.

Socio-cultural factors define norms, social values and patterns of behavior of people in area where company operates. They define preferences, demographic trends, changes in structure of population. Technological factors determine advancement that contribute to the production efficiency. Ecological factors determine the conditions of the natural environment and its influence on organization. Natural environment is characterized by raw materials needed for company's operations, energy price increase and the strengthening of state intervention in the process of rational use and reproduction of natural resources, pollution of the environment. Changes in the environment and impact on products that companies produce and offers to the market: shortage of needed raw materials, energy, pollution, waste management. Companies minimize the risks of uncertain environment by assess the external environment for identification of possibilities for growth, improvement, and minimizing the negative impact of it. Environmental analysis helps organizations to maximize the performance by taking advantage of opportunities but minimizing threats of the environment.

Dynamism

Environmental dynamism involves changes in technology, market demand and competitors. Dynamism refers to instability of changes in company's external environment. Environmental dynamism makes companies introduce new products and operate on different markets. The degree of predictability of environmental changes and its influence on organization defines environmental dynamism [84]. Because of the unpredictability and volatility associated with dynamism, constant changes of business environment is something that companies are facing daily. Dynamism refers to the volatility and unpredictability of changes in the business environment that a firm has to deal with. The dynamism of the environment is characterized by several elements. Changes in the environment itself are characterized by the rate of change. They affect the legal framework of economic activities, resources, markets and competitive environment. Factors like economic changes, technological advancement are affecting the organization. The dynamism of the environment leads to increase of its influence on the activities of the organizations related to international operations and foreign markets.

Size

Organizational knowledge and performance differ from company to company. Studies identified that depending on the size of organization, processes inside it differ. Because knowledge is a strategic asset for organizations its relationship with company performance has a major impact on company's survival. However, the impact of moderating factor as a size of an organization has an effect on processes between them. Size of an organization has an influence on its ability to create knowledge competence. Many studies identified that managing of knowledge is different in large organizations and SMEs. The size of an organization creates preconditions for all managing processes in organization, its resources, routines.

Organizational size has an impact on managing of knowledge. Therefore, the way how organization manages knowledge and the way how company use it for the influence on company performance is different.

Size of an organization determines its flexibility, flow of information and performance. here are three reasons for large organizations to be more flexible. The first reason is in organizational ability to use its resources in many ways by sharing it inside members of an organization. Larger organizations possess different resources and much more than smaller organization, therefore larger organizations have possibilities to allocate its resources in multiple ways and differently. The second reason is in organizational ability to take different processes and share risk by identifying the most effective ways for particular processes. Because many processes in organization require most effective and efficient solutions, large organizations have advantage because they can try multiple solutions and share all risks easier. The third reason lies in organizational ability to concentrate its resources on different tasks from different perspectives. On the contrary, some authors argued that SMEs are more flexible compared to large organizations. SMEs have less bureaucracy and more quicker in taking decision [85]. Moreover, SMEs more flexible because their organizational structure allows them quickly to change, learn and be more adaptable for external environment. Research identified that organizations with more flat structure have more effective management system there it has positive impact on managing knowledge in organization. However, large organizations possess more resources which allow to apply resources for their strategies more easily compared to SMEs. From this perspective, large organizations have benefits because it allows them allocate their resources on multiple different projects and share risk while in SMEs concentration mainly one project and usually risks are higher than in large organizations. Because organizational structure in most SMEs is flat it has a more easy flow of information. Large organizations have much complicated organizational structure with multiple levels where they cannot allow quick flow of information therefore changes are slow. However, knowledge directly depends on organizational ability to capture and obtain as much knowledge as possible. Therefore, organizational resources play crucial role for the all tacit and explicit knowledge organization can possess. However, in long-term development organizations ability to capture only needed knowledge which can fit organizational strategy is essential.

Organizational size has an influence not only on creating knowledge competence itself but on a relationship between knowledge competence and company performance. Knowledge competence and company performance are influenced by conditions which organizational size creates therefore the relationship between these elements differ from organization to organization. As a result, organizations tend to have different relationship among these variables. Because knowledge directly linked to strategy as well as organizational performance, organizational size helps to communicate strategy either easier or more difficult. Smaller organizations have less problems in communicating strategy and “get staff excited about the prospects than in larger organizations” [86, p.417]. Moreover,

control of knowledge competence activities in larger organizations is harder compared to SMEs. Because SMEs have more simple structure control mechanisms are more easier and open. Large organizations have more structure and complex control mechanisms which are more

SMEs has limited cash flow and concentrate mostly on current performance as well as having high turnover rate. The high turnover of staff compared to large organization makes the process of knowledge accumulation more difficult. Size of organization determines attitude towards the business. Several researchers identified that SMEs are not as profit oriented as a large organization.

Size of organization has an influence on ability of organization to manage its costs. However, more simple organizational structure in smaller organizations doesn't guarantee company's ability to manage knowledge. These factors define trust issues and communications among members of organizations as an important for organizations. It is argued that with the increase of size, organizational effectiveness decreases and knowledge processes inside organization are more slowly.

Thus, size of an organization has can be a moderating factor which affects the relationship between knowledge competence and company performance.

Industry

The influence of sector on relationship between knowledge competence and company performance was mentioned in several studies. Researchers identify that organizations which operate in product and service sectors tend to have different approaches to managing of knowledge, therefore the impact of knowledge competence on company performance also different.

Service organizations and product organization have different approach to managing of their knowledge which is related to their perception of knowledge. Service organizations and product organizations require specific mechanisms for managing knowledge, obtaining knowledge, sharing and protecting knowledge.

Knowledge competence in organizations of both sectors is in their human capital. However, depending on the role of knowledge itself for the success of organization knowledge competence can differ from organization to organization. Research in the area of knowledge competence identified that depending on type of business, knowledge protection methods different. For instance, high-technology industries where knowledge is crucial for company's running and production, have more formal methods for knowledge protection while organizations that doesn't depend on such kind of knowledge create mechanisms more simple [87]. Knowledge-intensive organizations have a different approach to managing of knowledge, therefore the whole process of managing knowledge and making knowledge organizational competence is different to other organizations where knowledge is less crucial. However, tacit and explicit knowledge and knowledge management mechanisms are different in product and service sectors. In some sectors tacit knowledge is the most crucial for organizational success while other mostly depend on explicit knowledge which have been stored in organization and

still have possibilities to help organizations to achieve better organizational performance.

Knowledge competence in service sector is different to knowledge competence in production sector. Organizations in service sector provide service and all their competences already depend on the knowledge they have and possess therefore the attitude towards knowledge is different in service sector organizations. However, production sector organizations don't require less knowledge but knowledge they have is different from knowledge service sectors have. In production sector organizational knowledge can be less frequently updated because organizational processes in this kind of organizations more likely to have a routine and doesn't change as often as services could. Knowledge competence in service organizations directly linked to organizations which have more knowledge intensive services which require unique knowledge. Therefore, knowledge intensity in both service and product sectors affect the relationship between knowledge competence and company performance.

Sector where company operates and performance has a connection in terms of which kind of impact does the environment of sector affecting the performance. The external environment of an organization has a significant impact on the processes inside it. The type of the industry where company operates set the intensity of competition, type of customers and their expectations, therefore organizational performance and sector related to each other. Moreover, type of the industry suggests the type of knowledge and qualities organizations need to possess which can create its competitive advantage.

Many researchers identified that depending on size of a sector the impact of knowledge competence on company performance is different. The barriers of the sector has an influence to the skills and knowledge employees possess, therefore the more competitive sector the more qualified employees organization need to be to create and sustain competitive advantage.

Sector sets up the level of knowledge competence in organization. It creates the internal environment which is influenced by external changes and conditions of a sector [88]. Therefore, organizations being dependent on the external environment need to minimize the negative impact of it by using knowledge to improve organizational situation and solve organizational problems.

Some authors argued that industry characteristics can have an impact on strategic perspectives of an organization as well as an outcome. Several competitive environment characteristics affect company's implementation of strategy and set activities of an organization such as dynamism (volatility), munificence (availability of environmental resources to support growth) and complexity/heterogeneity (diversity of competitive environment elements). These characteristics define organizational possibilities for growth, improvement in performance and sustainable competitive advantage. However, conditions of external environment don't limit organizational opportunities and only create conditions companies.

Firm that exploit new opportunities would outperform those who focus on exploiting existing opportunities. Therefore, industry where organization operates

creates preconditions for company's development and growth possibilities. Many researchers argued that industry determines organizational possibilities for diversification and profitability of an organization. This doesn't identify future development of an organization and how industry will determine company's performance in the future. However, the influence of industry on performance can set organizational strategies which would be specific for an organization in a particular industry which has own characteristics. Moreover, these strategies will differ from organization to an organization and will have different outcomes in each organization even in the same external environment.

From this perspective organizational knowledge and company performance depend on an industry and a sector where they operate. The relationship between knowledge and industry determined by the role of knowledge in particular industry. Each industry requires different knowledge from organizations and its employees therefore have the specific knowledge which are essential for a particular company determine the relationship between industry and knowledge. Moreover, uniqueness of knowledge available for each organization created by the possibilities of industry and a sector stimulate organizations to introduce unique combination of knowledge in each company.

Thus, the impact of knowledge competence on company performance in the unique conditions of each sector has different outcomes. Company's ability to operate in created conditions of the external environment defines its activities, resources, processes and organizational strategies. Strategic role of the knowledge creates multiple solutions for organizational strategies which are affected by the conditions of the external environment therefore possibilities and outcomes of combinations of knowledge, organizational development and implementation of strategies as well as performance outcomes are different and unique in each organization. The influence of sector on relationship between knowledge competence and company performance creates many possibilities for organizational performance.

Technologies

The influence of technologies on relationship between knowledge competence and company performance is related to the possibilities of technologies to be effective in knowledge processes in an organization. The positive relationship between knowledge and technologies creates more opportunities for organizations to obtain, use and apply knowledge. Many researchers argued that managing of knowledge directly influenced by organizational ability to use technologies in daily processes. Organizational knowledge has unique characteristics which can bring value to organization. Therefore organizations tend to use technologies to capture and keep knowledge in an organization. Tacit knowledge of individuals is crucial for organization. However, difficulties of keeping this kind of knowledge in organization stimulate the development and application of technologies in an organization so that company keep some part of tacit knowledge in a form of explicit knowledge.

Organizational tacit knowledge is always changing and developing. However, organizational processes don't always require tacit knowledge. Companies use explicit knowledge which is stored in organization because this knowledge supports the development of organizational routines and processes which each organization develops in accordance with its activities. Moreover, explicit knowledge sets up the level where organizational knowledge doesn't need to be changed often and should be shared inside an organization. Having an access to the same knowledge is vital to any member of an organization because organizational functioning depend on the access to organizational knowledge database. Any organizational database keeps all knowledge processes which happened in organizations and allows an easy access to employees of an organization.

Technologies have a positive influence in different situations, including employees ability to collect and analyse information and come up with rational decisions [89]. Constant and on-going update of technologies is needed for knowledge flow in the organization. Organization of work processes and multi-tasking are solely depend on technologies and it could be applied in any areas. Opportunity to use technologies as source to obtain data helps employees to come up with new decisions and ideas, including innovative solutions. The constant process of interaction between individuals and technologies is crucial for functioning of organization.

The interaction between knowledge management and information technologies creates positive changes and improvements in organization with company's ability to use technologies for better performance. It is important to understand that not all technologies can be useful in organization, therefore the right use of needed technologies help company to manage its knowledge. The decision-making process based on use of required and essential technologies help organizations to achieve strategic targets. Even in this, the role of individuals, employees in organization remains important and strategic for successful implementation of organizational changes.

In the area of knowledge management, researchers identified that knowledge management technologies include collaboration, mobile work, content management, business intelligence, business process management and knowledge sharing [90]. These processes help organizations to share knowledge with the use of appropriate technologies. Technologies organize and store available knowledge more efficient and effective while creating more possibilities for its use and application. However, technologies can minimize the problems of knowledge management but cannot solve them. The main reason for that is in company's internal environment, organizational culture which should be oriented towards knowledge for minimizing problems related to managing of knowledge. Successful introduction of technologies to existing knowledge processes in an organizations stimulate the use of knowledge by decreasing barriers which can limit humans possibilities to capture and store knowledge. Ability of organization to use technologies stimulates the exchange, transfer and sharing of knowledge because there is a possibility to keep this knowledge in organization.

Use of tacit and explicit knowledge available for employees in organization helps companies to generate more knowledge virtually. These days possibilities of technologies are endless and opportunities that they give create more ways to stimulate knowledge development in companies. Sharing of knowledge inside one department, group of people in organization becomes easier and helps individuals to consider new opportunities for improvement. Although, the certain level of trust is required and needed, otherwise it is quite challenging for employees to be open and share their ideas between each other. Apart from that issue, the collective thinking and ability of use technologies is beneficial.

Several studies consider the importance of knowledge transfer and use of technologies in large multinational organization. It is highlighted that the relationship between individuals in bigger organization is more distant. Therefore, knowledge transfer is considered as a tool that helps individuals to develop new knowledge within organization. The knowledge can be generated and transformed with the use of technologies in SECI process, which naturally helps knowledge to evolve in organization (table 4).

Table 4 - Transformation of knowledge through technologies

Knowledge	Improvements
Tacit to Tacit	E-meetings, chats
Tacit to Explicit	Answering questions, annotation
Explicit to Tacit	Visualization, browsable video/audio of presentations
Explicit to Explicit	Text search, document categorization
Source - Adapted from source [91]	

Organizations that are willing to invest in technologies may improve coordination, transfer and use of knowledge. The nature of knowledge makes it unique and inaccessible to others. Knowledge coordination requires appropriate processes and availability of all knowledge to those employees who are responsible to particular areas in organizational processes. The use of technologies can organize and facilitate improvements in distribution of knowledge among its members. Organizational networks stimulate the development of coordination more effectively and efficiently for company's use and application of knowledge.

Technologies can make processes of knowledge sharing easier and more time efficient for any size organization. Knowledge exchange is becoming simplified with the use of technologies as everyone has equal access to knowledge that is required for employees decision - making process. Creation of new solutions, internal improvements of organizational processes and performance possible due to company's ability to use technologies. Therefore, knowledge and technologies are interrelated and cause improvements in performance. In the long-term development possibilities for knowledge and technologies are unlimited because constant update of knowledge, changes in the environment and internally require all time access to

possibilities that technologies can provide for the company. In that case, organizational knowledge and technologies have an important influence.

Knowledge management technology has four processes [92]:

1. Knowledge identification and generation – identification of processes and creation of new knowledge;
2. Knowledge codification and storage – transforming knowledge with the use of technologies and storing;
3. Knowledge distribution – distribution of stored knowledge with the use of technologies in an organization;
4. Knowledge utilization and feedback – using and retrieving needed knowledge in organizational processes and giving feedback about the quality of knowledge and access to it.

These processes take place during use of technologies for managing knowledge in an organization.

Companies that implement technologies in their organizational processes has a certain limitations when organizational culture is not ready for that. Although, researchers in that area identified that more flexible and open to technologies culture always contributes to company's knowledge development. It helps organization with implementation of strategies due to good access to new knowledge and other sources that makes it easier for employees to use.

Organization that use technologies can use them for different purpose and according to that they are divided in three groups: knowledge-oriented technologies, function-oriented technologies, specialty-oriented technologies. Every kind of technology serves different needs of company. Knowledge management processes in any organization depend on individual who use them. Employees' ability to constantly update organizational knowledge with the use of technological tools determine the level of use and sharing of information. Employees with the use of technologies create organizational knowledge which is developed and created due to organizational culture which stimulates knowledge sharing and individual characteristics of employees only contribute to these processes. There are three characteristics of information that help employees use it for organizational purposes [93]:

1. Quality of information – proper interpretation and transformation of information to knowledge;
2. Accessibility of information – easy access to information positively influence to employees ability to use it;
3. Ease of use of tools – ability and conditions to use of technology tools.

Long-term knowledge development in organization is only possible with the use of technologies that are available for company's needs. While internal processes can stimulate or stop development of knowledge, employees as those who create knowledge has a great influence on that. The use of technologies contributes to ability of individuals obtain knowledge and apply it in organizational situations. Although, different type of technologies are serving different needs of the company. Knowledge management technologies which are specifically designed directly

contribute to organizational knowledge development. Various studies on Kazakhstan have been made by influential international bodies. The World Bank's "Doing Business" ranking is useful in identifying the environment where companies are operating. The methodology of the ranking helps to understand the barriers their lack or existence to do the business.

Table 5 - World Bank's "Doing Business" ranking of Kazakhstan

Indicator	Year					
	2015		2016		2017	
	Rank (1-189)	DTF score (0-100)	Rank(1-189)	DTF score(0-100)	Rank(1-190)	DTF score(0-100)
Ease of doing business	77	N/A	41	N/A	35	N/A
Starting a business	55	90,19	21	94,44	45	91,94
Dealing with construction permits	154	58,39	92	68,38	22	79,05
Getting electricity	97	72,96	71	74,03	75	73,64
Registering property	14	89,33	19	83,17	18	83,72
Getting credit	71	50,00	70	55,00	75	55,00
Protecting minority investor	25	65,83	25	66,67	3	80,00
Paying taxes	17	90,04	18	89,18	60	79,54
Trading across borders	185	7,87	122	60,39	119	63,19
Enforcing contracts	30	69,33	9	76,62	9	75,70
Resolving insolvency	63	51,45	47	58,97	37	69,17

Source - compiled by the author based on World Bank "Doing Business" reports 2015-2017 [94]

Based on the above, we can see that in the last two years overall position of the Kazakhstan has improved and country is in the first 50 countries where doing business is much easier (table 5). In terms of dealing with construction permits situation has changed very positively, as there are less difficulties now. The trading across borders indicators also has improved and we can see a positive trend. Additionally to country ranking World Bank has published the ranking based on cities in Kazakhstan (table 6).

Table 6 - World Bank's "Doing Business" ranking on cities in Kazakhstan

City	Ease of doing business	Starting a business	Dealing with construction permits	Getting electricity	Registering property
Almaty	1	5	1	1	1
Aktobe	2	8	5	2	7
Kostanay	3	6	2	3	1

Pavlodar	4	4	6	5	1
Oskemen	5	7	7	4	1
Karagandy	6	3	3	7	1
Shymkent	7	2	8	6	1
Astana	8	1	4	8	7
Source - Compiled by the author based on World Bank "Doing Business" report 2017 [94]					

Almaty has better conditions for business, but except starting a business category which tells that it is not that easy and has a ranking of five (figure 19).

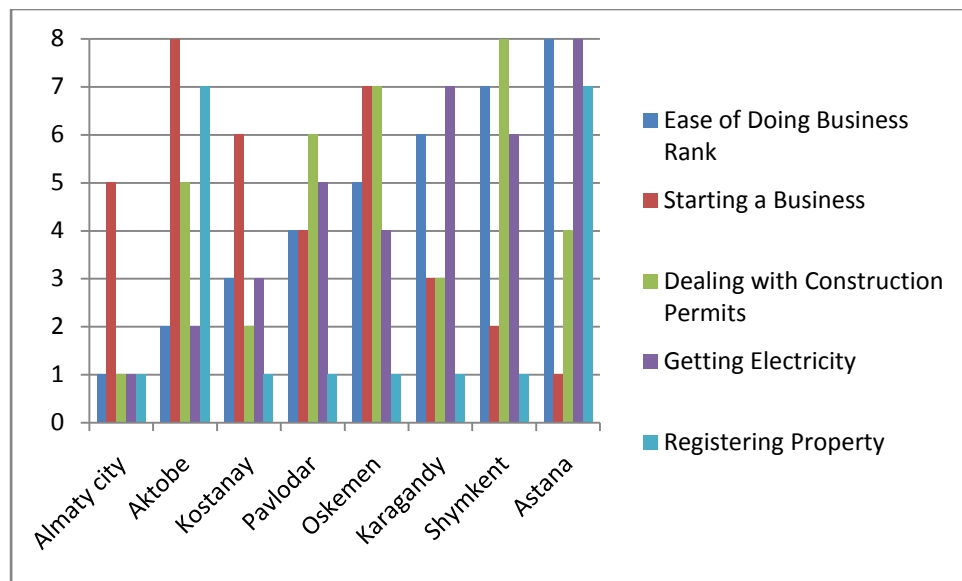


Figure 19 - Conditions of doing business in cities of Kazakhstan

Note - Compiled by the author according to the data from [94]

Global Entrepreneurship Monitor made a study on Kazakhstan in 2015. They had identified areas where still entrepreneurs face difficulties and need the improvements. They are the following, listed in order of priority [95]:

- government policies;
- corruption;
- financial support;
- education and training;
- government programs;
- R&D transfer;
- commercial infrastructure;
- physical infrastructure access;
- capacity for entrepreneurship;
- internal market openness;
- information;
- economic climate;
- political, institutional and social context;

- cultural and social transfer;
- work force features;
- different performing of small, medium, and large companies.

SMEs are considered as a driving force for economic growth. In the past decades, the activities of the government were aimed to create favorable conditions for SMEs development [96]. The creation of the "DAMU" Entrepreneurship Development Fund in 1997 was one of the important steps to continuously support SMEs development in Kazakhstan. The main areas where fund is involved are:

1. Financial support;
2. SMEs development.

The "DAMU" fund is helping to attract sufficient funding for SMEs. The activities of SMEs are coordinated in accordance with Entrepreneurial Code which is used since 1st of January 2016. According to the Code enterprises are categorized in several groups (table 7).

Table 7 - Categories of enterprises

Enterprise type	Description
Small enterprises	individual entrepreneurs without a legal entity and legal entities engaged in entrepreneurship, with an average annual number of employees not more than a hundred people, and the average annual income of not more than 300 000 monthly calculation index established by the law on the national budget and applicable as of January 1 of the corresponding fiscal year.
Medium enterprises	individual entrepreneurs and legal entities engaged in business not related to small and large enterprises
Large enterprises	individual entrepreneurs and legal entities engaged in business and meet one or two of the following criteria: the average number of employees of more than two hundred and fifty men, and (or) the average annual income of over 3 000 000 monthly calculation index established by the law on the national budget and applicable as of January 1 the relevant financial year.
Source - compiled by the author based on https://uchet.kz/month/predprinimatelskiy-kodeks-respubliki-kazakhstan/ [97]	

Moreover, with the acceptance of Entrepreneurial Code the role of National Chamber of Entrepreneurs "Atameken" becomes more important as a connecting

element between the state and entrepreneurs. The main activities of the chamber which is a non-for-profit organization are the protection and representation of entrepreneurs, participation in government initiatives to develop entrepreneurship, development of skills and knowledge of human capital, as well as internationalization of local business.

The main indicators of SMEs

In the figure 20, the dynamics of number of active SMEs in 2005-2015 is presented. The overall number of SMEs has increased in 2015 compared to 2005 for almost twice. This tendency shows the continuous growth of the number of enterprises.

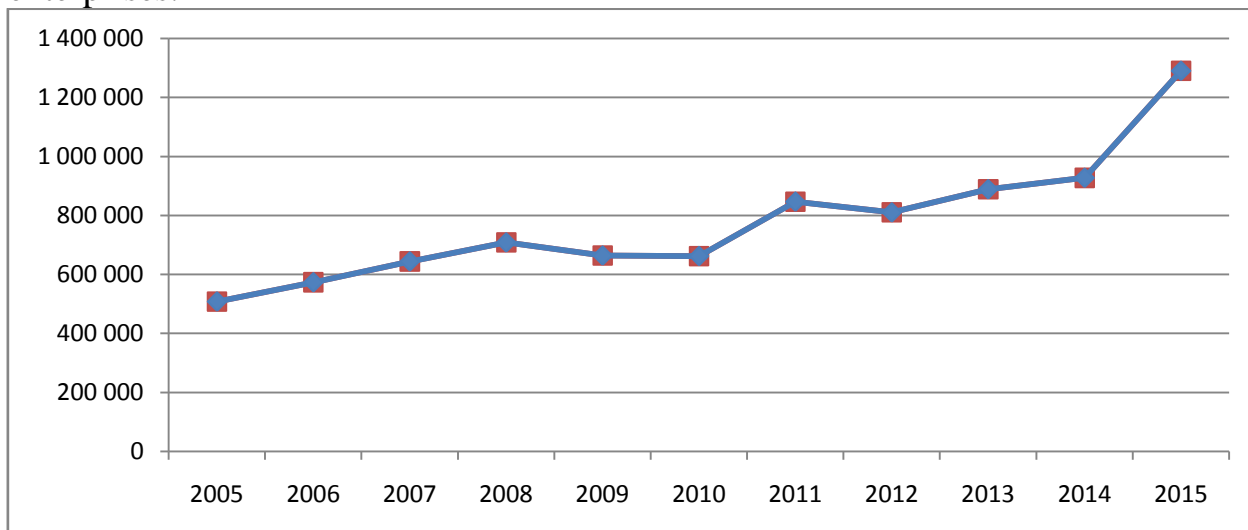


Figure 20 - Number of active SMEs in 2005 – 2015

Note - Compiled by the author according to the data from [98]

In terms of region activities of SMEs, the leader is the South Kazakhstan region, Almaty region and Almaty. These results represent economic activity of the regions compared to the rest of the country (figure 21).

Moreover, the positive tendency of growth is present in each region which indicates consistency in the government policy, support and stimulation of SMEs over the past 10 years. The activities of government such as different sources and mechanisms to provide SMEs with not only financial but also management support lead to the positive trends. This is also supported by the production output of SMEs in millions of tenge in 2005-2015 (figure 21). As it is seen from the graphs, the output of the SMEs is increasing which resulted in the improvements of the indicators on the country level (figure 21) and regional (figure 22).

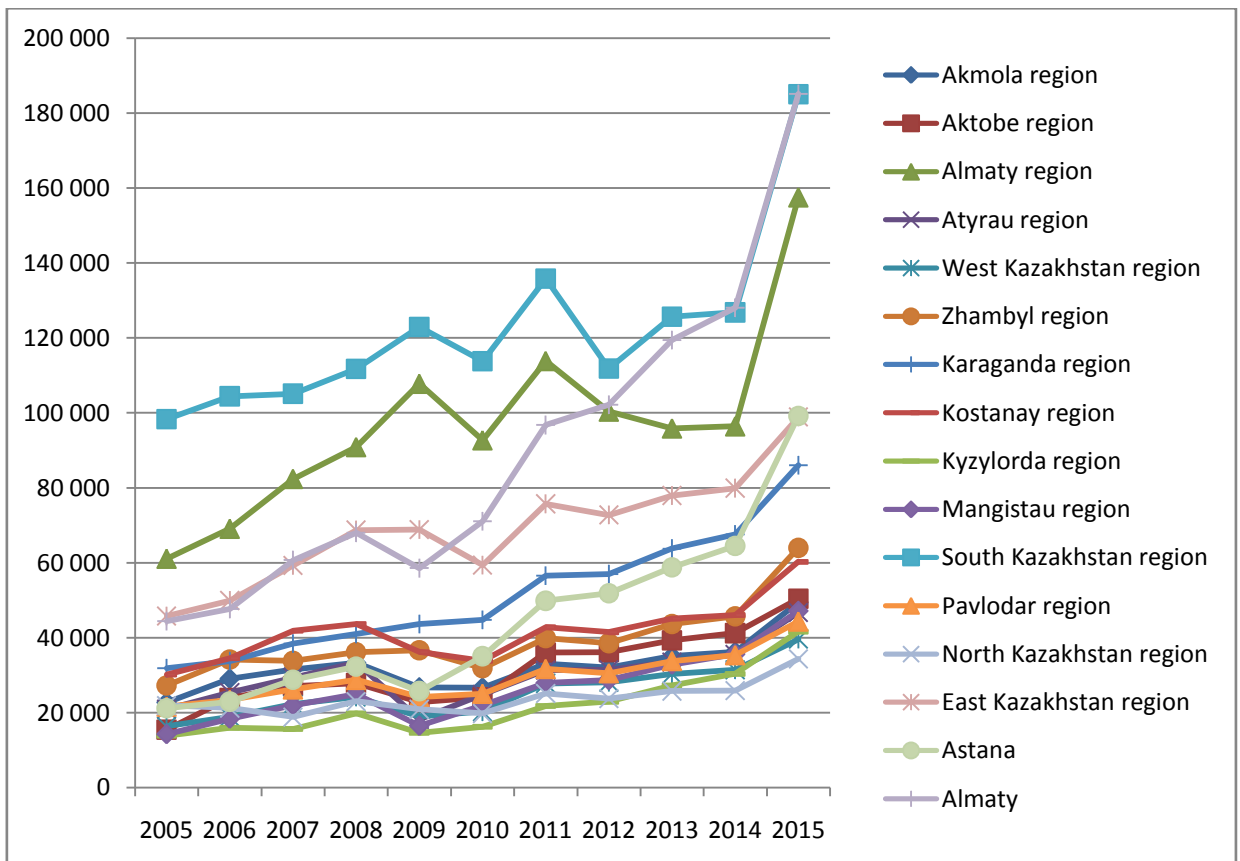


Figure 21 - Number of active SMEs by region in 2005 - 2015

Note - Compiled by the author according to the data from [98]

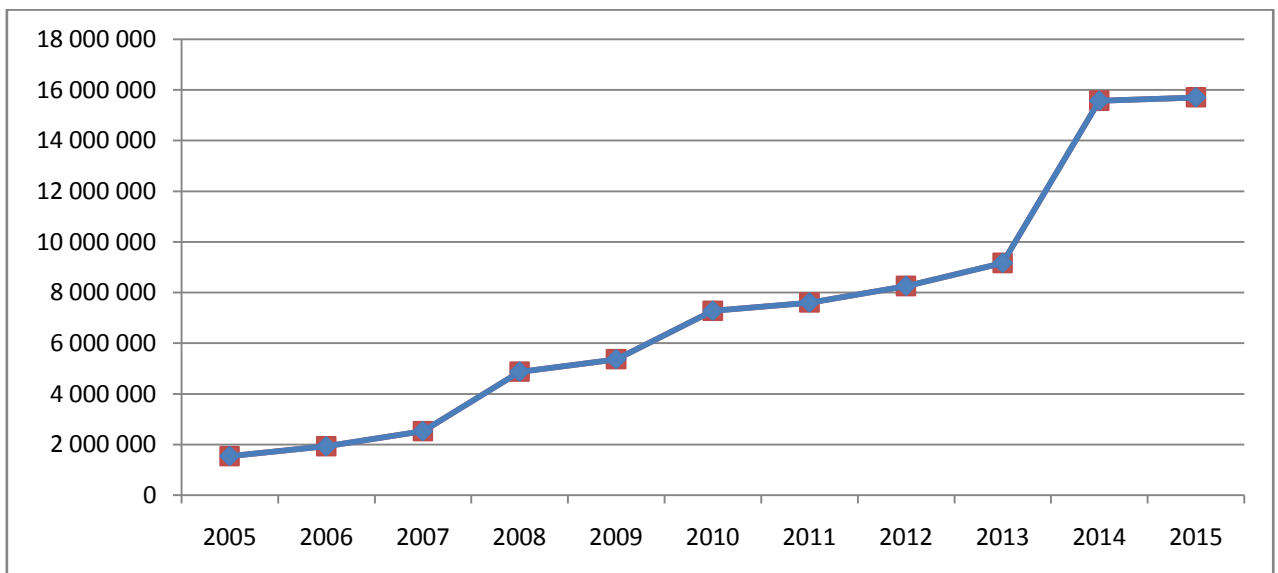


Figure 22 - The production output of SMEs in millions of tenge in 2005-2015

Note - Compiled by the author according to the data from [98]

The production output by regions represented by two biggest cities: Astana and Almaty. This is a logical representation of population's ability to purchase goods in

biggest cities as well as the increase in demand for goods (figure 23). The drastic difference between big cities and regions demonstrates fewer activities happening in regional SMEs development compared to areas where SMEs should be active by definition. However, Almaty and South Kazakhstan region are the leaders in terms of active enterprises. While Astana is sharing the fourth position with East Kazakhstan region.

The overall dynamics of SMEs has the positive trend which is confirmed to SMEs contribution to the GDP of the country. However, the latest changes in macroeconomic environment had demonstrated the number of changes which might have the long-term influence to the economic growth of the country.

Despite that, all activities targeted to stimulate economic shifts in the country, have its positive results and contribution. Government support and attraction of capital to various industries demonstrate the complex and systemic processes to stimulate development of SMEs.

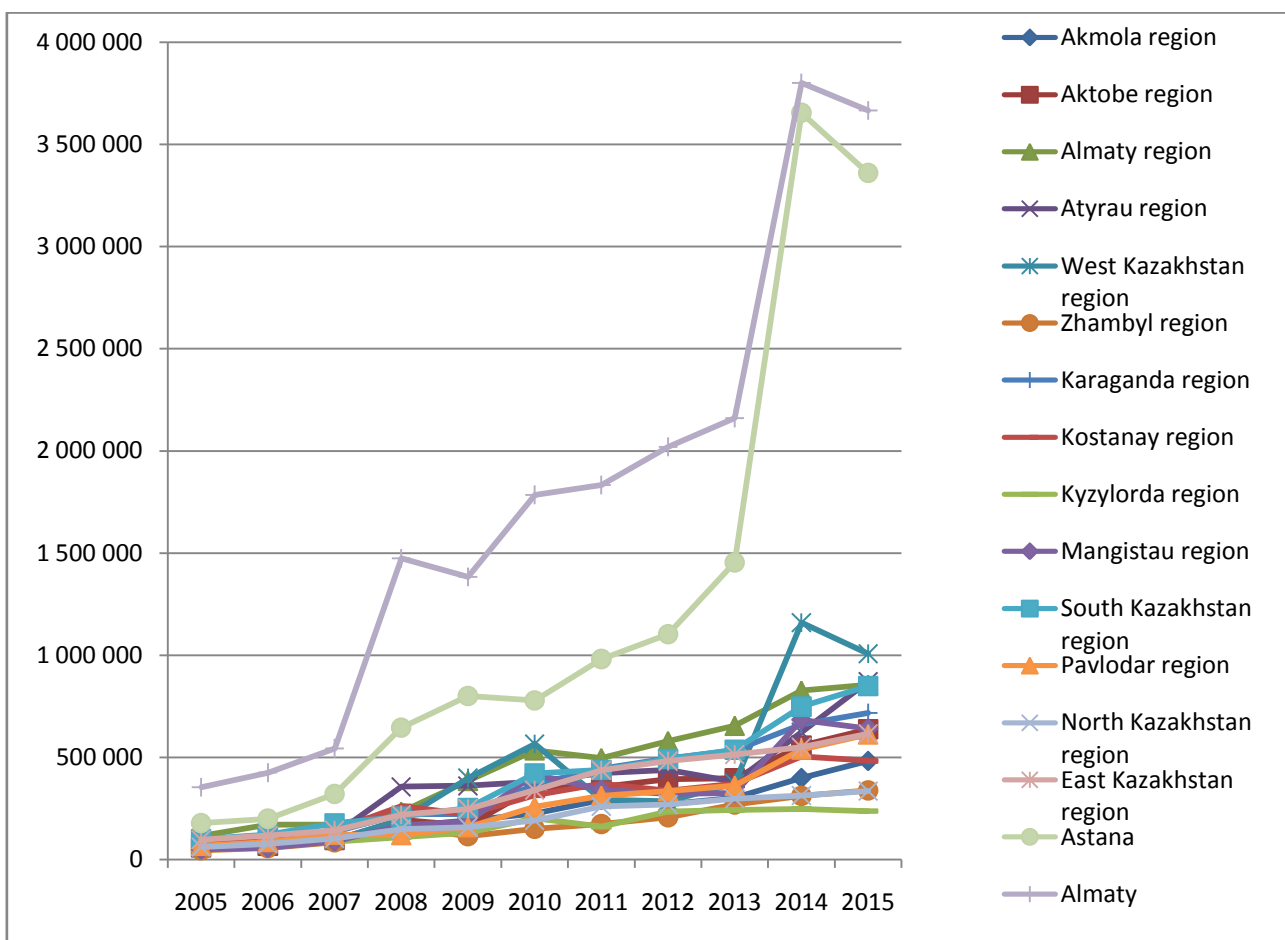


Figure 23 - The production output of SMEs in millions of tenge by region in 2005-2015

Note - Compiled by the author according to the data from [98]

The input of SMEs to GDP is presented in figure 24. Over the past 11 years it has increased from just only 10% to 25% which indicates the steady input of SMEs activities into country's GDP.

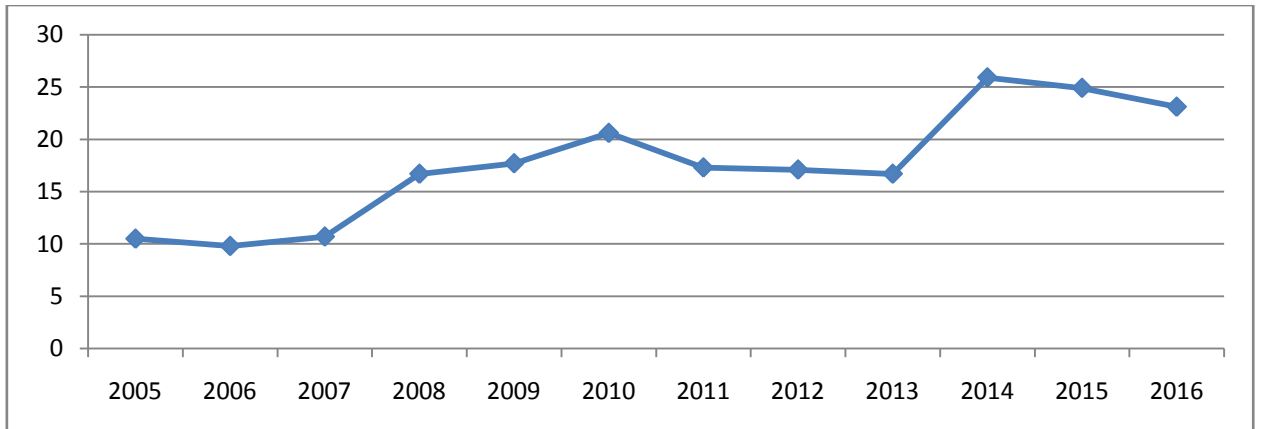


Figure 24 - The input of SMEs to GDP in 2005-2016

Note - Compiled by the author according to the data from [98]

On the regional level the contribution of Astana is quite dramatic compared to other regions. Although, over the past 11 years there is a positive contribution from each region (figure 25).

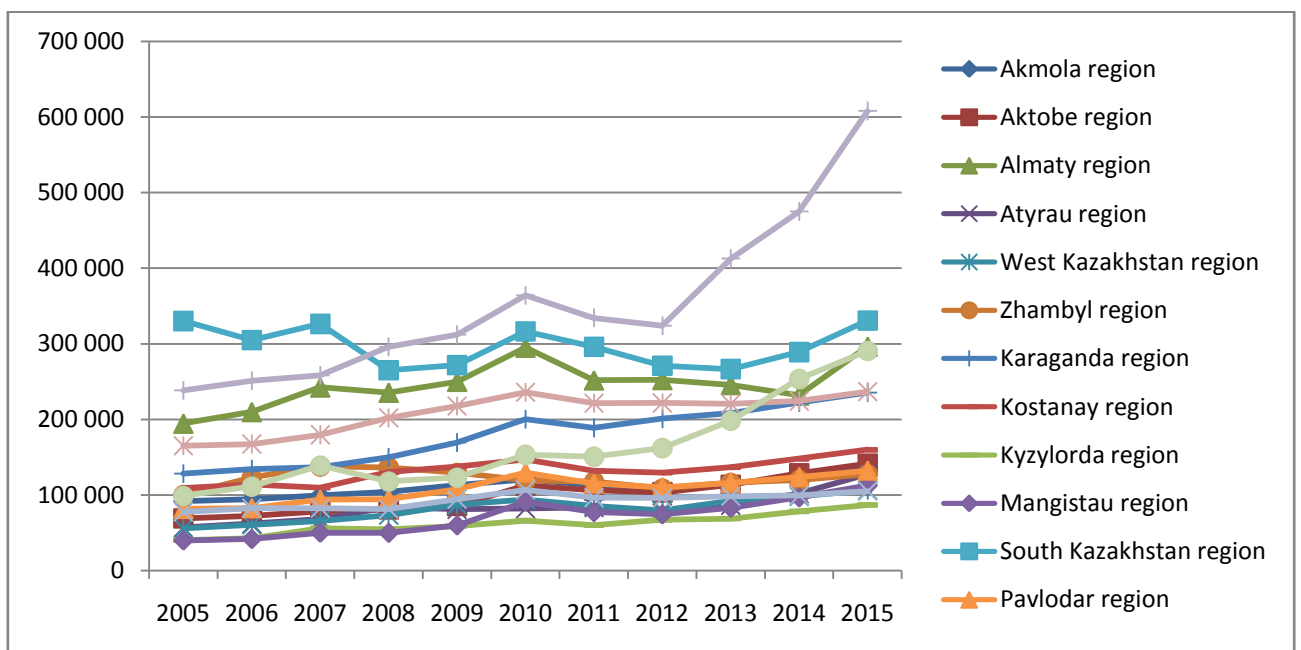


Figure 25- Contribution of regions to the GDP in 2005-2015

Note - Compiled by the author according to the data from [98]

Number of population involved in SMEs activities has increased over the past years. Compared to 2005, this indicator has increased from below 2 000 000 people to over 3 000 000 people employed by SMEs (figure 26).

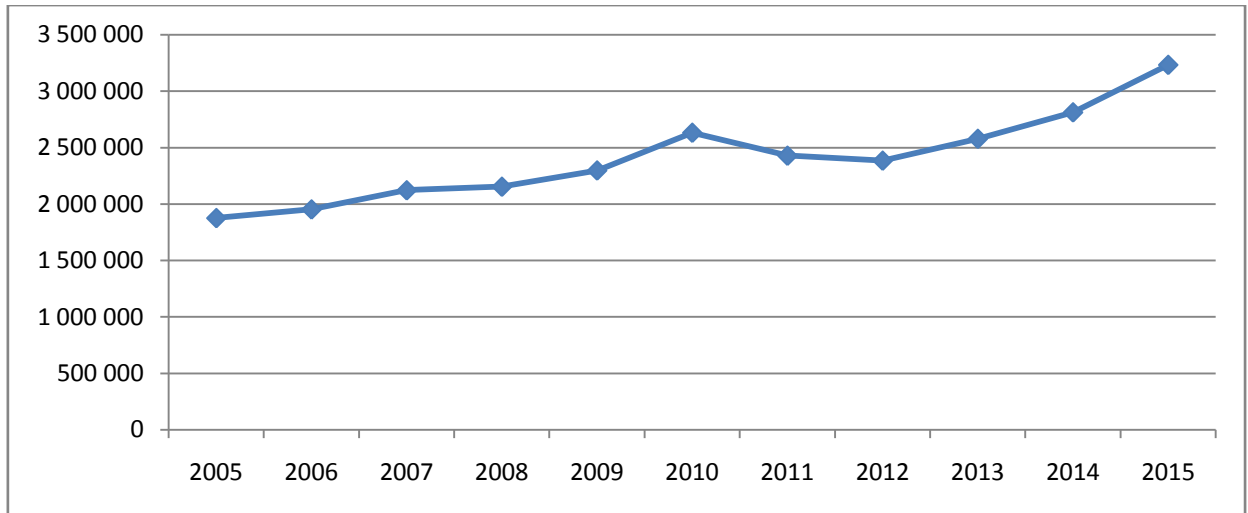


Figure 26 - Number of population involved in SMEs activities in 2005-2015

Note - Compiled by the author according to the data from [98]

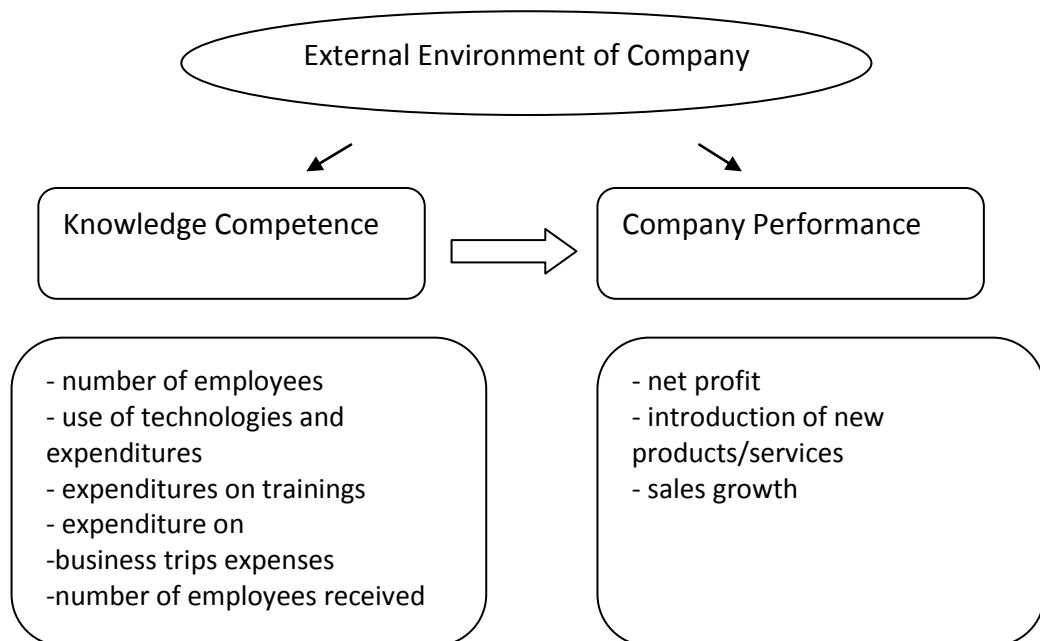


Figure 27 - External factors, knowledge competence and company performance indicators

Note - Compiled by the author

The key indicators of SMEs in Kazakhstan showed the positive trend of SMEs development in the country. The government support of SMEs ensures needed level of stimulation of the development. Moreover, the active enterprises shows that actually there is an output which contributes to GDP as it is well known that SMEs are aimed to develop economies of the country. Due to the recent changes of the natural resources market and economic changes in the country, the role of SMEs becoming even more important. Although, current economic situation creates extra difficulties for business. The political and economic integration in region also greatly contributes to the stimulation of the development of competitive advantage in local companies which will enable them to survive and compete on a global scale.

In the figure above, we are suggesting the way to understand indicators of knowledge competence, company performance and the external environment which has an impact and the studies by World Bank and GEM has studied them. Knowledge competence indicators are represented by number of employees in organization, use of technologies, expenditures on trainings and business, and lastly, number of employees who have received the training. The company performance indicator can be analyzed by net profit of organization, introduction of new products and services and sales growth. In the sections below we will be providing information on the study of SMEs in Kazakhstan.

2.2 An analysis of existing capabilities as determinants of knowledge competence structure

Educational project "Business Communications" implemented in partnership with The National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" and the Institute of Engineering and Information Technologies (IEIT) Kazakh-British Technical University aimed to provide support to small and medium-sized entrepreneurship, carrying out its activities in priority sectors within the framework of the "Business Road Map - 2020" program and is intended to develop knowledge in area of entrepreneurship and to improve competence of existing businessmen.

The first stage of the program was implemented in Kazakhstan and included the improvement of the business qualifications of the participants. Through in these business trainings, entrepreneurs received skills in two main sections: managerial competencies and knowledge in the field of foreign economic relations.

During the training process, participants developed their own business plans or product. The second stage provides for a free four-week thematic business training in Germany at similar enterprises and establishing business contacts with foreign partners in direction which involves knowledge transfer with foreign partners. Entrepreneurs were trained in five groups:

- group one - 77 (Almaty);
- group two - 57 (Astana);
- group three - 22 (Ust-Kamenogors), 29 (Astana); 62 (Shymkent);
- group four - 33 (Almaty); 68 (Karaganda);

- group five - 34 (Atyrau); 122 (Astana) and 43 (Kostanay).

Total number of trainings both online and on-site more than 450.

The trainings were aimed to develop and enhance competencies of individuals and aimed to influence their individual performances and well as long-term performance of organization.

In order to analyze the knowledge competence indicators of SMEs operating in Kazakhstan we have analyzed indicators of the following companies (table 8).

Table 8- Information about studied SMEs

Name of company	Year established	Size	Service/Product	Number of employees
1	2	3	4	5
Keremet Holding	2016	Small	Service	3
ИП "Ма Фра"	2016	Small	Service	10
C&IEC	2012	Small	Service	2
ИП "Джарлыханова"	2015	Small	Service	2
ТОО "Международный центр Евразия"	2013	Small	Service	8
ИП Morning Express	2010	Small	Service	2
ИП SSA Consulting	2010	Small	Service	10
Бизнес Бастау	2013	Medium	Service	47
СПК "Премиум НИВВА"	2016	Small	Product	2
Note - Compiled by the author				

The majority of studied SMEs are providing services to the market and belong to the small business. Through the comparison of the above companies we will be able to understand their activities and processes within the organization.

Learning capability provides organization with the constant knowledge flow. It makes knowledge of individuals in the organization update frequently and be in the process of change. Because knowledge learning process involves constant changes it needs flexible environment which ensures that all knowledge existing can be learned between employees of an organization and limited barriers support knowledge learning. The first one is the processing happening during knowledge learning. Secondly, conditions which exist and affect knowledge learning. Thirdly, the impact of knowledge learning on business performance.

Senge considered knowledge learning process as a determinant for the success of organizational performance [99]. The main aim for knowledge learning capability is to improve sales, increase customers which will influence to long-term development and performance of a company. According to Prieto and Revilla "organizations having a superior learning capability are able to coordinate and

combine their traditional resources and capabilities in new and distinctive ways providing more value for their customers and, in general, stakeholders than can their competitors" [100, p.170].

Some authors identified the positive relationship between learning and financial results of organization. Moreover, Cesnovar identified that apart from improvement in financial performance, learning capability affects employee mobility and motivation, better response time, quick implementation of changes in a company [101]. Nevertheless, effects of learning capability on company performance cannot be limited only by financial indicators. Learning capability is important for competitive advantage of an organization because it is hard to copy and helps for product development, customer service. Moreover, companies that know about customers and competitors are more likely to have a more successful performance because of their knowledge of trends and changes. Companies that have learning capability can combine traditional resources in new ways which are different from competitors, therefore, providing more value to customers and stakeholders. This leads to improved reputation, development of new products or services. Learning capability positively affects for improvements of quality, company's growth and its profitability. Many researchers argued that in order to have superior learning capability it is important to promote individual, team and organizational learning. It means that all levels of the company experience enhanced learning and performance improvements. Several studies identified positive relationship between learning capability, firm strategy and performance [102,103]. The positive relationship between learning capability and organizational performance was identified in both small organizations and big organizations. However, indicators used to measure learning capability as well as performance are different and there is no consistent measure for that.

In the analyzed companies employees were exposed to the trainings and have been able to obtain new knowledge. Despite the size of organizations and number of employees they have been trained to obtain new knowledge in the area of entrepreneurship, professional and communicational skills development. In the figure below, we analyzed the training expenses of studied companies (table 9).

Table 9 - Expenditures on trainings in 2012-2016

Name of company	Expenditures on trainings in 2012-2016, in tenge
Keremet Holding	500000
ИП "Ма Фра"	100000
C&IEC	3000000
ИП "Джарлыханова"	200000
ТОО "Международный центр Евразия"	400000
ИП Morning Express	500000
ИП SSA Consulting	1300000

Бизнес Бастау	3500000
СПК "Премиум нивва"	N/A
Note - Compiled by the author	

As we can see from the table above, companies spend money on trainings consistently except СПК "Премиум нивва" which just started its operations and hired people without even spending money on teaching as they had to do on the job training which does not really require any extra spending from them. Companies had spent around 1 million tenge on average. This indicator represents their investments in human capital and its development. Taking into consideration the fact, that majority of studied companies are small, we think that these investments represent deep understanding of the importance of new knowledge for company's development.

Within the same perspective organizational culture is influential. Organizational culture influences performance when values of a particular culture are shared among employees. From this perspective, the stronger the culture the more it affects the performance of employees. Different cultures influence differently company performance.

According to Paulin et al. culture related to effectiveness of service organizations [104]. Moreover, several authors identified that adaptive culture affects performance in big organizations. It was identified that culture affects expertise of employees, teams and overall organization. Moreover, Tseng identified that adhocracy improves organizational performance more than hierarchy or clan culture. More adaptive culture improves organizational performance because it can understand and satisfy the needs of stakeholders. In terms of influence on financial performance, Barney identified that strong cultural values and superior financial performance are related to each other [105].

It is important to take into consideration leadership in SMEs, as very often leaders are those who bring themselves an organizational culture. Management style defines the organizational processes and creates approaches of how organizational knowledge is managed. Different management styles show different attitudes towards management of organizational processes. However, leadership role in managing knowledge is significant for organizations. Many authors studied the impact of leadership and management style on knowledge management processes in an organization. Leadership plays an important role in creating an environment in organization where employees are encouraged to participate in knowledge management processes. The role of leaders is unique and different management styles create different outcomes for organizational performance. In the context of managing knowledge, organizations should be aware of the management style and leadership.

The role of managers in implementation of knowledge is influential. They help to create a knowledge environment which stimulates employees to create, share and apply knowledge. Some authors argued that resources need to be allocated rightly for the development of new knowledge through sharing in an organization. Later in

2012 von Krogh et al. has introduced the framework that ranges from centralised to distributed leadership at three layers of activities [106, p.349]:

1. A core layer of local knowledge creation;
2. A conditional layer that provides the resources and context for knowledge creation;
3. A structural layer that forms the overall frame and direction for knowledge creating in the organization.

Leadership behaviour should bring benefits for organizational use of knowledge. Therefore, management style should stimulate knowledge related processes and develop organizational practices in the area. However, research showed that adaptor style can stimulate knowledge management in an organization and promote knowledge management initiatives.

Gulski introduced the measures of knowledge-management system which has different styles such as enquire-based style, traditional style, direct-instruction style, enquiry-based traditional style, direct-instruction traditional style, enquiry-based direct-instruction style and balanced style [107]. The study identified that organizational knowledge management style connects to the methods of organisational learning processes in an organization.

Some authors argued that lack of leadership in an organization has a negative impact on implementation of knowledge management initiatives, therefore role of leadership in managing organizational knowledge is important. Leadership role defines the quality of contributions of employees to the development of organizational knowledge.

Leadership style has an influence on organizational development of learning practices. The level of success in learning was determined by ability of leaders to encourage learning in an organization and create possibilities for knowledge development when it is needed.

The role of managers in managing knowledge in an organization is important for knowledge-sharing processes. Moreover, the example of a leader sets up path for employees in an organization to follow and move towards effective knowledge management processes. However, some authors argued that leadership style for leaders is crucial because it stimulates knowledge management on all organizational levels. The role of management style is influential not only on top level but also on middle level because middle level managers connect bottom and top level and create connection between them. According to Takeuchi middle managers mediate between top level and bottom level employees knowledge [108]. Moreover, leadership role is essential for resolving conflicts related to knowledge management. They identified leadership style of people is significantly related with organization's knowledge management practices. Moreover, the leadership style significantly predicts the art of knowledge management practices in an organization. Therefore, the role of leadership style on knowledge management practices is significant and gender of a leader doesn't affect leadership style and knowledge management practices.

Some authors argue that transformational leaders are able to impact performance of an organization. Any leadership style requires trust between employees and leaders for successful outcomes. Ability of leaders to create trust and support environment ensures that employees are ready to follow leader, trust each other and create networks which promote knowledge development in an organization. The relationship between leader and subordinates reflect to the whole management in an organization and performance. Some authors stress the importance of networks for organizational performance development. According to Hyypia and Pekkola (2011) leaders create loyalty, respect and willingness of employees to create more [109]. Management style reflects in the motivation of employees, their involvement into work process, encouragement of employees to perform better for achieving organizational goals. Moreover, leaders have a power to create vision and goal for every subordinate to create a long-term purpose for everyone in an organization.

Leadership considered as one of the enablers of knowledge management among technology, culture and measurement. However, leadership role in successful management of organizational knowledge is expected to be in innovation development. Leadership in knowledge management have possibilities to stimulate decision-making process in an organization where employees are encouraged to develop innovations through collaboration. Moreover, employees' involvement in decision making process may ensure organizational long-term development because collaborative environment always creates place for new knowledge development, knowledge sharing processes which can lead to that.

Leadership has a possibility to change processes in an organization and persuade employees with showing new ways for achieving organizational goals. Kotter argued that leadership can define success of an organization because it ensures that organizations have future vision and can adapt to changes.

According to Anantatmula and Kanungo (2010) organizational leadership and culture can create successful knowledge management system [110]. From this perspective, strategic focus on knowledge management is important for an organizational success and collaboration inside an organization. The knowledge competence of an organization depends on management style which have an influence on mechanisms of managing knowledge in an organization.

The influence of leadership on organizational performance is very important. Leadership creates possibilities for organizational performance to change and develop through creating of sustainability in an organization.

Many authors argue that leadership has an impact on organizational outcomes. The style of management ensures that organizational processes are directed towards achieving organizational goals. Management of knowledge is related to individuals and leadership style affects processes happening inside an organization. On the contrary, each employee has unique knowledge and leadership style only creates possibilities for sharing it with others. Therefore, successful leadership can create a positive influence on organizational performance.

Organizational performance and leadership are related to trust. Douglas and Zivnuska argued that leadership where trust exists in an organization has strong link with company performance. They identified that trust in leadership and sales show strong connection. Ability of leaders to create trust in an organization stimulates individual to contribute to organizational success, therefore trust shows that individuals are valuable for company's success [111].

Thus, the relationship between knowledge competence and leadership defined by ability of leaders to create conditions inside an organization where employees can feel trust and loyalty to obtain new knowledge, share knowledge for achieving company's goals. Leaders role in creating environment related to creating culture which can ensure that employees feel valuable for organization and have an influence in decision making process. Collaborative environment encourages individuals to apply and use their knowledge when there is a need to solve organizational problems. The relationship between leadership and organizational performance defines the success of leadership in an organization. Studies identified that effective leadership contribute to organizational results. Therefore, role of leaders in organizations very influential for company's survival and creating an environment where everyone in organization engaged in organizational development, achievement of organizational goals and following one strategy which is aimed to improve company performance. The number of employees who have been trained within these organizations have been studied (table 10). In this context the performance of employees and their ability to share knowledge depends a lot on organizational culture and role of leaders in the organization.

Table 10- Information about performed trainings in SMEs

Name of the company	2012	2013	2014	2015	2016	Number of trainings in 2012-2016	Total Number of Employees
Keremet Holding	-	-	-	-	3	3	3
ИП "Ма Фра"	-	-	-	-	0	0	10
C&IEC	1	0	1	2	2	6	2
ИП Джарлыханова	-	-	-	-	1	1	2
ТОО "Международный центр Евразия"	-	1	1	1	1	4	8
ИП Morning Express	0	0	0	1	1	2	2
ИП SSA Consulting	1	3	4	4	6	18	10
Бизнес Бастау	3	2	3	10	30	48	47
СПК "Премиум нивва"	-	-	-	-	0	0	2
Note-Compiled by the author							

As we can see from the table above, studied organizations had been able to send employees to trainings, and majority of them were consistent with that. For example, in the company Бизнес Бастай they had been able to organize trainings consistently every year and as company is considered as a medium enterprise we can see how strong they're in developing their human capital, benefits that people can bring to the organization. The trainings is not the only way how companies can enhance their knowledge, it also can be done with use of technologies enabling them to make an access to knowledge easier.

The importance of technologies in development of any organization could be identified as a strategic and key to company's development. Changes in the environment, increased competition makes the development of new strategies essential for company's survival on the market. The main aim of technologies is to create technological advancement and help company to enhance its achievements. Many studies found out the positive relationship between development of information technologies and company's productivity levels. Although, only constant development and implementation can make improvements in long-term perspective. It is well-known fact that technologies require some financial investments and from this, the larger organization then it is easier for it to obtain resources for new technologies. Moreover, constant technological advancement makes it even harder for SMEs to introduce them in companies. Therefore, it is always challenging for SMEs to obtain new technologies.

Technologies stimulate the development of interactive learning and increase company's ability to adapt to changes. The use of information and communication technology (ICT) helps organizations to obtain more knowledge and provide an access to experience-based learning for employees. Technologies make diffusion of knowledge easier and engage employees in development of innovations. Moreover, technologies can increase the speed of changes in organization because it gives different dimension to employees' knowledge and stimulates more innovative processes in organization. Access to all knowledge available in organization through repositories of knowledge encourages employees to find better solutions to solve organizational problems.

Technologies help organizational members create networks where knowledge can be shared and used to improve position of an organization [112]. Organizations develop knowledge better in more flat organizational structure compared to hierarchical, therefore technologies give opportunity to make everyone's access to knowledge more equal and less defined by position or status in organization. Technologies stimulate communication processes in organization which creates more flexible environment in an organization and help employees to maximize the use and application of available knowledge.

Some authors argue that IT doesn't always have positive impact on business performance. This paradox means that IT doesn't improve company performance but helps competitors to copy it. However, several studies identified that IT has an impact on strategic performance and operational performance. Thus, organizations have possibilities for improvement of operational performance and strategic

performance therefore organizational ability to minimize the negative impact of IT paradox can create more possibilities for organizational development in long-term.

Company's technology strategy has three variables such as technology capabilities (internal and external strategies that develop technological capabilities), technology adoption and diffusion (technology diffusion and adoption in an organization), technology competence (company's strategy to develop technologically competence employees who can use technologies) [113]. IT capabilities such as IT infrastructure, human IT resources and IT-enable intangible resources are aimed to enhance organizations business performance through using other organizational resources on the same level as IT resources [114]. IT business value and IT resources stimulate the development of organizational performance and create possibilities for organizational growth and improvement. Moreover, increased possibilities for organizations due to use of IT stimulate the development of internal processes and business processes in an organization.

Some authors identified that technical IT skills can increase organizational absorptive capacity. They argue that technical IT skills can improve organizational ability to perceive information because IT creates storage and helps employees to access information when needed. Moreover, organizational ability to retrieve information through IT helps organization to create networks and obtain and create new knowledge. Companies which lack absorptive capacity cannot use all organizational knowledge and implement it into their organizational processes therefore organizational ability to capture knowledge and apply it when needed is crucial for company's improvements in performance.

The role of IT skills and organizational performance enhance possibilities of absorptive capacity in organization. Many studies argued that absorptive capacity has a direct impact on organizational performance because it creates changes in an organization through adaption to external environment. Moreover, this creates possibilities for organizations to bring innovation through new knowledge and created changes.

IT competency is related to ability of an organization to use technologies for organizational improvements. Some authors define three categories related to IT competency: IT knowledge, IT operations and IT infrastructure. These categories identify organizational possibilities to understand and apply benefits of IT. IT knowledge "describes the degree to which the organization understand capabilities of existing and emerging IT", IT operations refers to "IT-related methods, processes and techniques that may be needed if these technologies are to create value", IT infrastructure refers to "artifacts, tools and resources that contribute to the acquisition, processing, storage, dissemination and use of information" [115, p.646]. IT competency allows organizations to use technologies available to organization through creation of organizational routines which support use of stored knowledge, transformation of tacit knowledge to explicit and ensuring of easy knowledge application processes in an organization. IT creates opportunities for organization to share knowledge more efficiently and effectively. However, IT creates possibilities for organizational knowledge application process to be more effective because of

technical support which directs employees' decision-making process to the core of an issue. Organizations which use IT in daily operations tend to have more organized knowledge which is more easily to coordinate and implement in organizational processes. Because management processes in an organization closely related to organizational performance, the influence of IT on both and their relationship ensures that technologies can influence the relationship between knowledge competence and company performance. IT competency has a positive impact on knowledge processes in an organization. Therefore, organizational ability to use IT helps it to manage knowledge and create more opportunities for the development of knowledge and innovations. Because IT competence includes knowledge as a category it stimulates facilitation of organizational knowledge through processes and determines which knowledge are required for organizations and encourages employees of an organization to obtain new knowledge.

In the studied organizations technologies have a minor role. In the table below we can see the use of technologies (table 11).

Table 11 -Use of technologies in SMEs

Name of company	Number of additional technologies (except standard Microsoft Office)
Keremet Holding	0
ИП "Ма Фра"	1
C&IEC	0
ИП "Джарлыханова"	0
ТОО "Международный центр Евразия"	0
ИП Morning Express	1
ИП SSA Consulting	0
Бизнес Бастау	0
СПК "Премиум нивва"	1
Note - Compiled by the author	

Regarding the expenditures on technologies in the past five years, the maximum that companies were able to spend is 17,5 million tenge (figure 28). Due to the nature of SMEs this number is much lower compared to organizations bigger in size and with enough funds for funding technologies.

As we can see in the figure below, studied organizations had spent on average 6 millions tenge on trainings over the past years. Many researchers argue that influence of IT on managing of knowledge stimulates the development of organizational processes, performance and improves productivity and creativity of employees. However, there is no direct connection between the influence of IT and knowledge management and financial performance. Therefore, IT processes in an

organization stimulate organizational capabilities to have an influence on preconditions for the development of organizational competitive advantage.

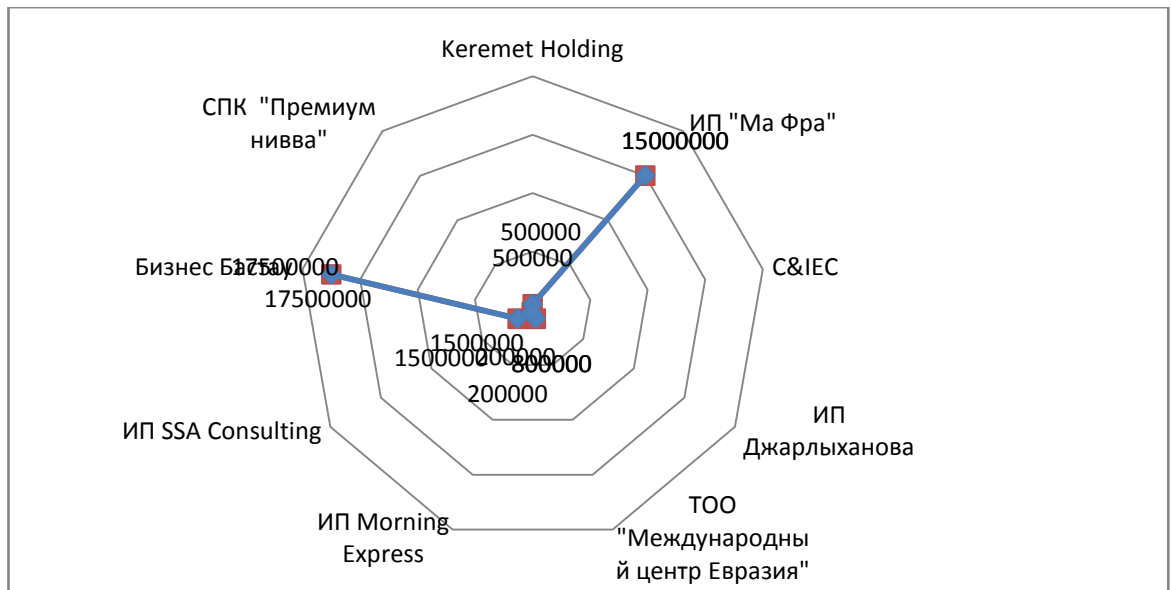


Figure 28- Expenditures on technologies

Note - Compiled by the author

Organizations which use technologies face a problem of substitutability of technologies which makes it difficult for companies to create long-term development possibilities. However, ability to manage knowledge outside of technologies creates more opportunities for organizations develop value and develop high-order process capabilities.

IT resources stimulate company's product and process innovations. Ability of organizations introduce technologies to routine business operations ensures that they are developing possibilities for innovations. Research in the area of technologies and managing knowledge defines that creating of appropriate culture which can help to use benefits of technologies is crucial for organizational success. Intrapreneurship culture determines the implementation of innovations and environment inside an organization which can stimulate the relationship between technologies and employees. They identified intrapreneurship culture lead to higher sales growth, market share growth and product and market development. Many authors defined the role of culture in knowledge creation process therefore in relationship to technologies its role highlighted and determines success. Innovativeness of an organization depends on environment which will support both process and product innovations. The role of individuals becomes significant. Ability to motivate and encourage employees for knowledge sharing and developing it within the context of supporting technologies determines the level of organizations acceptance of changes and new approach towards managing organizational processes. Because environment which stimulates the development of organizational knowledge

through technologies doesn't limit possibilities it helps organization to develop knowledge in different areas and creates alignment of employees' knowledge with the strategic development of an organization.

The close relationship of technologies to generating more knowledge in an organization makes it very influential for organizational knowledge competence. However, conditions in an organization define the success level of technology implementation and its ability to create knowledge and apply it. Moreover, organizational ability to create appropriate culture motivates employees to use technological benefits and therefore be more innovative in solving organizational problems. Technologies being an organizational resource have a very important strategic influence on whole organization. Because companies operate in fast-changing environment nature of technologies supports and encourages organizations to evolve and be more innovative. However, ability of organizational environment to motivate and encourage employees creates multiple possibilities for organizational development. Therefore, organizational knowledge and technologies have a close link which affects to the organizational development in long-term.

Innovation capability

Some studies reveal that new knowledge development is related to company's competitive advantage because it is reflected in its openness to changes. Organizational perspective on innovation capability refers to introduction of new processes, products or ideas in the organization. Moreover, the capacity to innovate includes skills, knowledge and capabilities that are able to help organization use them more quickly than other organizations on the market. Innovation is the capability to improve performance of the organization in relation to new knowledge.

Normally, organization's ability to innovate closely linked with the knowledge exchange, sharing and transfer which occurs a lot during business trips and connections with stakeholders of organization. The boost in company's ability to be more creative directly reflected in individual's perception of knowledge richness and their ability to use whatever was learned.

In the table 12 below the expenditures of SMEs on business trips are presented.

Table 12- Expenditures on business trips in 2012-2016

Name of company	Expenditures on business trips in 2012-2016, in tenge
Keremet Holding	500000
ИП "Ма Фра"	100000
C&IEC	2500000
ИП "Джарлыханова"	200000
ТОО "Международный центр Евразия"	800000
ИП Morning Express	500000
ИП SSA Consulting	1300000

Бизнес Бастау	4500000
СПК "Премииум нивва"	NA
Note - Compiled by the author	

As we can see from the table above, expenditures are ranging from 100 000 tenge up to 4,5 million tenge. This numbers represent company's willingness not only to travel for business reason but also the chance to be exposed to new ideas, and opportunities.

Innovation capability closely related to firm performance. Many researchers identified positive link between innovation capability and organizational performance. According to Hult et al. it creates possibilities for survival and success of the company [116]. Moreover, different type of innovations affect differently performance of the company. Organizational innovations influence coordination and affect efficiency measures of company while technical innovations influence competitiveness and affect results of effectiveness measures. Innovations have positive effect on business performance. Moreover, companies which have innovation capability are better at responding and reacting to changes in customers' needs. Therefore, innovations influence to the products development which leads to better financial performance [117]. Moreover, innovations lead to improvements in the sales, employee growth and their productivity.

2.3 An assessment of company's market and organizational performance as the company's performance key indicators

Companies measure their performance for several reasons. Neely argued that performance measurement has certain reasons: checking position, communicating position, confirm priorities and compel progress [118]. Checking position includes scanning of current position of organization and comparing it with competitors. Communicating position reflects the ability of company to have an open communication process with stakeholders and company's ability to share important information with them. Confirm priorities – results help organization what is valuable for their performance and what should be more stressed. Compel progress – companies know specifically what they need to improve based on the analysis of company performance and they set goals based on a recent analysis. Company performance can be measured by financial and non-financial indicators. Many authors identify multiple indicators and measurement approaches for company performance. However, the most popular are key performance indicators and balanced scorecard approach. Key performance indicators (KPI) shows changes in the organization in dependence with changes over some period of time on specifically developed indicators for particular industry or company. These indicators usually represent several areas which are important to company and crucial for organizational development. Many authors argue that key performance indicators is quite subjective in measuring company performance because it changes in different companies and industries. Moreover, key performance indicators are limited in identification of company performance in multiple areas because usually

there is a certain elements which are examined and based on that, company performance is identified.

Key performance indicators are essential for general identification of company's performance because it shows some of the company's changes over some period of time and how company have implemented new strategies and ideas.

KPI allows organization to define what elements are important and how company can use them to improve its performance. Depending on the type of business, industry KPI can differentiate and change over some period of time. Strategic development of company have a great impact on development of KPI as well as other results of company performance. It is important for organizations to use more precise to identify criteria by which company performance using KPI can be measured. For monitoring of company's results it is crucial to use the same system each year so that results can be comparable with the previous period. Moreover, implementation of KPI has own preconditions. Organization should have clear goals which can be measured as well as organizational process which has clear objectives for development.

Kaplan and Norton developed a model for measuring company performance – balanced scorecard approach is a mix between financial and non-financial indicators which allow to measure the performance of a company [119]. This measurement model includes several criteria: financial perspective, customer perspective, internal process perspective and learning perspective. Financial perspective is related to measuring financial indicators of company and its changes over certain period of time. Customer perspective is aimed to measure customers satisfaction and ability of a company to meet expectation of customers. This element of balanced scorecard approach is very important because it shows to which degree company can meet expectations of customers and how well company can differentiate from its competitors to increase customers' loyalty. Internal business perspective is aimed to measure the effectiveness of processes which make changes inside the organization and can make positive changes in organization which can result in changes of company's performance. Innovation and learning perspective represents ability of company use new knowledge and skills and an access of employees to them. Moreover, learning perspective shows the degree to which company use innovations in their operations.

According to Venkataram and Ramanujam company performance has several dimensions: financial performance, business performance and organizational effectiveness [120]. Financial performance measures financial indicators of the company such as return on assets, return on equity and return on sales. Business performance includes market-based measures and value-based measures. Organizational effectiveness measures social responsibility, employee satisfaction, product quality. The nature of SMEs makes it hard to obtain objective data about financial indicators of the company performance. Perceived organizational performance and perceived market performance measure both financial and non-financial indicators of the company. According to Delaney and Huselid (1996) perceived organizational performance measures product quality, customer

satisfaction and new product development and perceived market performance concentrates on economic outcomes of the company performance such as profitability and market share [121].

Knowledge assets are considered as firms intangible resource which is essential for a sustainable competitive advantage. Resource-based view and knowledge-based view of the firm state that the main purpose of knowledge in the organization is to help it achieve sustainable competitive advantage. However, the knowledge assets are complex and have many elements which affect different areas in the organization. Thus, knowledge assets are considered as a resource to compete with other organizations. The nature of knowledge means constant change, therefore, knowledge in organization is always changing.

Research by Hou and Chien also related to dynamic capability perspective which shows the relationship between dynamic capability, market knowledge management competence and business performance [122]. Moreover, this study identified that market knowledge management competence and dynamic capabilities have a positive impact on business performance. This study considered market knowledge management competence which is a knowledge asset of organization. However, this study doesn't represent the whole knowledge assets of organization but some part of it.

Strategic development of an organization and role of knowledge assets determine the relationship between them. Knowledge assets are important for company because they help to achieve organizational objectives on the strategic level. Knowledge-based view of the firm highlights the strategic nature of knowledge for organization. Therefore, the connection of knowledge and strategic development of an organization is very important for organization. Nonaka stated that "in an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is knowledge. When markets shift, technologies proliferate, competitors multiply, and products become obsolete almost overnight, successful companies are those that consistently create new knowledge, disseminate it widely throughout organization, and quickly embody it in new technologies and products" [123, p.96]. Organizational knowledge assets are created from individual knowledge assets, thus the knowledge of the entrepreneurs have an impact on firm performance meaning that educational level, skills and knowledge are important for company performance of SMEs.

According to Lerro et al. there are four knowledge asset assessment strategies [124]:

- Knowledge asset measurement strategy (KAMS);
- Knowledge domain assessment strategy (KDAS);
- Knowledge asset accounting strategy (KAAS);
- Knowledge asset communication strategy (KACS).

The KAMS strategy measures organizational knowledge assets for achieving goals in organizational performance. The KAAS strategy aimed to monitor and collect information of existing knowledge assets in the organization for the future development of organizational knowledge assets. The KDAS strategy is aimed to

identify and analyze organization's competencies and develop organization's knowledge asset growth. The KACS is aimed to identify company's value and communicate possibilities for increase of company's value externally.

Knowledge assets have an impact to organizational performance [125]. However, effectiveness and efficiency of organizational performance depends on organization processes and competencies. It means that internal processes in the organization ensure successful use of knowledge and any other competencies which help to improve performance.

Different studies discuss the impact of knowledge assets. Teece (1998) identified that "the competitive advantage of companies in today's economy stems not from market position, but from difficult to replicate knowledge assets and the manner in which they are deployed" [72, p. 62]. Human capital considered as one of the intellectual capitals which have an effect on performance of the organization. However, it was identified that structural capital affects organizational performance. Relational capital also affects performance of the organization. Youndt et al. identified that knowledge assets positively affect company's organizational performance [126]. Studies by Wong and Aspinwall stated that relationship capital have an impact to the improvements in performance. Knowledge assets are represented by different sources which affect to the creation of value from different perspectives [127].

As analysis of the performance can be divided to market performance and organizational performance. We have analyzed the sales growth of the organization. In the table 13 below, we can see the positive sales growth occurring in all organizations, within the period of 2012-2016.

Table 13 - Sales growth in the 2012-2016

Name of the company	Year of establishment	2012	2013	2014	2015	2016
Keremet Holding	2016	-	-	-	-	17%
ИП "Ма Фра"	2016	-	-	-	-	5%
С&ИЕС	2012	3%	5%	4%	8%	15%
ИП Джарлыханова	2015	-	-	-	3%	5%
ТОО "Международный центр Евразия"	2013	-	3%	5%	5%	6%
ИП Morning Express	2010	3%	2%	5%	4%	4%
ИП SSA Consulting	2010	4%	4%	7%	8%	10%
Бизнес Бастау	2013		7%	9%	18%	22%
СПК "Премиум нивва"	2016	-	-	-	-	3%
Note - Compiled by the author						

Organizational strategies determine which knowledge is essential for organization and ensure that knowledge brings value to an organization. Organizational strategies represent paths for knowledge assets and possible ways for the development of knowledge assets. Because knowledge assets represent a complex system where knowledge is vital for organization, constant processes of changes in internal and external environments make knowledge change as well.

Jantunen identified that knowledge as a strategic asset can influence company's competitiveness in the uncertain environment [128]. Chen et al. argued that there is a significant impact of managing knowledge on business performance [129]. Because company performance is represented by different aspect, the complexity of company performance and its relationship with knowledge competence and knowledge assets in particular have many dimensions. Lopez-Nicolas and Merono-Cerdan identified that knowledge has a contribution to corporate performance in several areas: financial performance, which includes market performance (profitability, growth and customer satisfaction); process performance, which includes quality and efficiency and internal performance which is related to employee capabilities (employees' qualification, satisfaction and creativity) [130]. Moreover, they argued that knowledge has an effect on innovation in the organization which also improves performance.

Human capital as part of knowledge assets has significant role in organizational performance. Ling and Jaw argued that human capital can improve financial results of a company [131]. Research by Andreeva and Kianto identified that financial performance and competitiveness of the firm influenced by human resource management and information communication technologies practices [132]. The relationship between knowledge assets and financial performance determine the level of effectiveness of knowledge use in an organization. Information communication technologies practices act as a determinant for the level of organized and structured knowledge management practices in a company. According to Lee et al. company performance is influenced by the knowledge of the organization which exists in all levels of the organization. This contributes to the idea that knowledge exists in all processes, levels and individuals in a company [133]. Because knowledge of individuals contributes to organizational level, it can bring value to company performance. According to Korac-Kakabadse et al. organizations that manage knowledge can change their organizational culture and introduce new values in the organization. These changes related to knowledge assets and reflected in its influence on organizational performance [134]. Intellectual capital as a main organizational knowledge asset has a strategic value for organization. Research by Wu et al. identified the positive relationship between intellectual capital and organizational performance, and intellectual capital and competitive advantage. This study confirmed that intellectual capital as a knowledge asset can bring changes to organizational performance.

Because organizational performance directly linked to internal capabilities of organization, we can measure it through new products introduced to the market in the past years (table 14).

Table 14 -Number of new products/services introduced to the market

Name of company	Number of new products/services introduced in 2012-2016, since the day of establishment
Керемет Holding	10
ИП "Ма Фра"	0
С&IEC	0
ИП "Джарлыханова"	1
ТОО "Международный центр Евразия"	2
ИП Morning Express	2
ИП SSA Consulting	4
Бизнес Бастау	8
СПК "Премиум нивва"	0
Note - Compiled by the author	

Based on the above and comparing to sales growth we can see that those companies who have introduced more new products had a positive growth in sales compared to those who didn't. For example, Keremet Holding and БизнесБастау have introduced new products/services and their sales have improved.

According to Schiuma and Lerro intellectual capital has the following reasons for impact on company's performance [135]:

1. Improvement of efficiency and effectiveness always related to improved performance. It means that by constant development of organizational competencies it is achievable and because competencies are always connected to knowledge assets, the impact of knowledge assets which is created by intellectual capital exists in an organization.

2. Because of the strategic role of knowledge in an organization, knowledge always important to company performance. Strategically knowledge has two major influences on organizational strategy: organizations focus and develop knowledge assets that influence organizational strategy and organizations can develop and identify strategies and then identify which knowledge they need and develop them in the organization.

3. Knowledge assets always related to creativity and new knowledge. Through the process of knowledge assessment organizations can define which knowledge they need and can bring success to organization. Moreover, knowledge assessment allows organizations to identify which knowledge they need and how to develop it.

4. Intellectual capital is complex and differs from company to company. Organizations can improve it by learning from each other, and it can result in improvement of company performance.

The performance of the companies has been analyzed through net profit indicators. As we can see in the table below, organizations had experienced growth

in their net profit (table 15). Depending on the scale it is ranging from 10 millions of tenge and average is around 3 millions of tenge.

Table 15- Net Profit in the 2012-2016, in tenge

№	Name of the company	Year of establishment	2012	2013	2014	2015	2016
1	2	3	4	5	6	7	8
1	Keremet Holding	2016	-	-	-	-	100000
2	ИП "Ма Фра"	2016	-	-	-	-	2000000
3	C&IEC	2012	500000	1200000	700000	1000000	600000
4	ИП Джарлыханова	2015	-	-	-	1200000	1700000
5	ТОО "Международный центр Евразия"	2013	-	5000000	5000000	7000000	10000000
6	ИП Morning Express	2010	0	0	0	1200000	1700000
7	ИП SSA Consulting	2010	1200000	1550000	1800000	2300000	3100000
8	Бизнес Бастау	2013	1000000	1000000	2000000	3000000	5000000
9	СПК "Премиум нивва"	2016	-	-	-	-	2000000
Note - Compiled by the author							

Some studies related to identifying the impact of knowledge on performance of the organization focus on costs and quality. It was identified that managing of knowledge can reduce operational costs and improve quality of products. However, their study highlighted that organizations create new knowledge within the existing needs of an organization and applying it where it is needed the most. This perspective on relationship between knowledge assets and organizational performance represent similar view that costs be a proxy of quality as well as performance. This study stresses the importance of organizational use of knowledge when it is required and when it can bring major benefits for an organization. Because organizations use existing knowledge, it is important to obtain and create new knowledge for implementation of changes which are caused by changes in the environment both internal and external.

Thus, studies in knowledge assets identified the impact of knowledge assets on company performance. However, different researchers introduced own dimensions of company performance which result in different performance results for organizations. Moreover, some studies concentrate only on particular elements of

knowledge assets which have more specified results on its impact on organizational performance. The complex nature of knowledge assets which consists of all available knowledge in an organization determines the complex relationship between knowledge assets and organizational performance. Because knowledge assets are essential for any organization, its role is strategic and at the same time is crucial for company's survival in any conditions.

Summary for the second chapter

The relationship of knowledge and company's performance has been studied previously mostly within the large companies. It has been studied that knowledge and company performance are closely related. Knowledge competence components such as knowledge assets, learning capability, culture capability, innovation capability and communication capability have an influence on organizational performance. Firstly, knowledge assets and knowledge capabilities influence the performance of organizations depending on other factors. Secondly, the relationship between knowledge competence and company performance is affected by external factors. We found out that knowledge components affect company performance in different ways, depending on the type of culture inside the company, leadership style, availability of resources, technologies and organizational structure. Therefore, in order to understand how organizational context affect the relationship between knowledge competence and company performance we further looked at factors such as size, industry and technologies. External environment for any type of business is crucial, that's why environmental uncertainty and dynamism should also be considered in the relationship between knowledge competence and company performance.

All studies related to knowledge and company performance were done in other countries and in majority of cases in large companies. Although, SMEs are able to generate knowledge and because of internal flexibility they might have greater relationship between knowledge competence on company performance.

Analysis of SMEs development has shown positive changes. The increased importance of SMEs to Kazakhstan economy makes the area of knowledge competence even more important. The increase in SMEs' GDP contribute shows positive performance shifts inside organizations. Results of activities of SMEs demonstrated in several indicators both of knowledge competence and performance of organizations.

3 THE MODEL OF THE IMPACT OF KNOWLEDGE COMPETENCE ON COMPANY PERFORMANCE

3.1 International experience in managing knowledge for SMEs in Kazakhstan

Knowledge in organization are created on the basis of individual and group knowledge. Therefore, knowledge competence which includes knowledge asset, learning capability, culture capability, communication capability and innovation capability is always linked to these two levels. It is obvious that compared to other countries, majority SMEs in Kazakhstan are not technology-driven and require innovations in their operations. Therefore, limited involvement in knowledge management activities result in different level of knowledge available for organization. Moreover, knowledge management activities in SMEs are more informal and ability to improve cultural, behavioral and organizational challenges are more valuable for organization. Due to the formality of knowledge management in large organizations and factors such as different needs (of large organizations compared to small) and high cost might be a reason why there is no moderating influence on technologies on the relationship between knowledge competence and company performance [136]. Moreover, the issue of receptivity demonstrates company's capability to transfer existing technology through the processes of awareness, association, assimilation and application (table 16).

Table 16 - Processes of receptivity

Activity	Process
Awareness	Processes by which an organisation scans for and discovers what information on technology is available
Association	Processes by which an organisation recognises the value of this technology (ideas) for the organisation
Assimilation	Processes by which the organisation communicates these ideas within the organisation and creates genuine business opportunities
Application	Processes by which the organisation applies this technology for competitive advantage
Source - Adapted from source [137]	

Technology-driven SMEs are companies are those which highly depend on technologies and have it in their core activities. Technology-following SMEs are those that adopt the technologies of technology-driven SMEs and become late users of needed technologies. Technology-indifferent SMEs are companies which activities doesn't depend on technologies and any technological changes and improvements are ignored by them. Moreover following factors are considered to improve technology transfer in organizations [138, p.358].

- high quality of incoming communications;
- readiness to look outside the firm;
- a willingness to share knowledge;

- a willingness to take on new knowledge, to license and to enter joint ventures;
- effective internal communication and coordination mechanisms;
- a deliberate survey of potential ideas;
- use of management techniques;
- an awareness of costs and profits in R&D departments
- identification of the outcomes of investment decisions;
- good-quality intermediate management;
- high status of science and technology on the board of directors;
- high-quality chief executives;
- high rate of expansion.

Study on SMEs in UK found out that factors such as leadership, culture, strategy, resources, training and education and human resource management are more important for adoption of the knowledge management in organization. Our research results are consistent with this study. SMEs can improve their impact of knowledge competence on company performance by developing culture capability, communication capability and innovative capability. Study on Australian SMEs suggested that intellectual capital development in SMEs should be strongly related to the informality of knowledge management practices in SMEs therefore it requires extra adjustments and improvements for any policy implications for SMEs. In research on knowledge management and SMEs it is suggested that focus on human resources is the core for creation of knowledge. Employees should have general knowledge, profession knowledge and abilities and enough experience to be able to contribute to organizational knowledge development [139]. In this sense, knowledge assets are becoming a key for understanding its influence on company's position on the market. Analysis of companies in USA confirmed that there is a positive relationship between knowledge sharing and leadership. Human resource management plays important role in making appropriate conditions for employees. Also, it helps employees to obtain, transfer, share and create knowledge. Information technologies make easier for organization to store and transfer knowledge within the organization. Leadership is essential for knowledge management because it guides employees of organization to achieve better results, improve performance. These dimensions help individuals to become less dependent on a leader and give them control over their actions. 5 dimensions help individuals to share knowledge and create new knowledge. Because empowering leadership gives a freedom to individuals it stimulates their own actions and behavior which are not limited by the directions of one leader who initiate all changes in the organization. In this case, leader is a supporter who guide individuals by giving examples, recognize their contribution and treat them equally. In terms of smaller organizations study on Germany found out that techniques such as training, job rotation, expansion management, mentoring, knowledge maps, knowledge databases, best practice sharing, customer relationship management, e-business and intelligent agents are good to retain knowledge. These techniques are focusing only on human capital and don't prove required new knowledge generation required for SMEs in a changing environment.

Study by Gharakhani and Mousakhani (2012) suggested that in terms of knowledge development SMEs differ from large organizations in the following: "personalized management, with little devotion of authority; severe resource limitations in terms of management and manpower, as well as finance; reliance on a small number of customers, and operating in limited markets; flat, flexible structures; high innovatory potential; reactive, fire-fighting mentality and informal, dynamic strategies" [140, p.40]. In the study of Iranian SMEs they identified that knowledge acquisition, knowledge sharing and knowledge application influence SME's sales growth, quality improvement and customer satisfaction. Based on the above, we can conclude that nature of SMEs depending on the country and type of SME has different peculiarities in managing knowledge. In relationship to results of our study on SMEs in Kazakhstan we can conclude that main focus of SMEs should be on organizational learning, creation of culture which will be able to enhance the opportunities provided by new knowledge to organization. On a bigger scale OECD indicates that countries in order to be more competitive these days turn into knowledge-based economy where use and creation of knowledge is the key. OECD states that contemporary economies are the following:

- an innovative economy, in terms of knowledge content;
- a networked economy, in terms of knowledge presentation;
- a learning economy, in terms of knowledge social type;
- a green economy, in terms of organizational sustainability.

The pillars of knowledge-based economies are education (higher level of education and skills needed to develop knowledge economy), innovation (innovative research, companies and universities transfer knowledge to local companies); institutional system (cooperation between government, companies in order to use available knowledge infrastructure) and ICT (information-communication technologies needed to improve the life of people in society).

For SMEs in Kazakhstan which are quite far away in their abilities to generate and create, the concept of organizational learning and human capital theory become quite essential in order to culturally change the perception to knowledge and methods of using available and created knowledge in organization. A learning organization - is an organization that creates conditions for the training and development of all employees and in the process of continuous improvement. In a learning organization the consciousness of its employees is always changing and adaptive. A learning organization is able to improve the knowledge and skills at individual and organizations levels. As part of such an organization learning takes place not only in the traditional forms of seminars, trainings, but also in the workplace, where people share their knowledge and help each other. Leading companies are adopting the practice of continuing education each employee throughout his working life. The forms of education can be different: internships and trips to training centers, laboratories, and other similar enterprises; courses organized within the firm; courses at the training centers. Education is often regarded not only as a means to replenish the necessary knowledge, but also as a means of establishing fruitful contacts.

Argyris suggested that organizational learning takes place under two conditions: first, when the organization achieves what intended to achieve, and secondly, when the discrepancy between the intentions and the results observed and appropriate adjustments occur. He distinguishes two types of learning: single and double loop learning. Peter Senge has developed the five principles of learning organization:

1. Systems thinking is about understanding of the links with the external environment.

2. Personal mastery - gaining of new knowledge, staff improvement and development based on the personal needs and organizational requirements.

3. Mental models is the ability to predict situations, and find the right solutions for different challenging situations.

4. Building shared vision is the idea that employees have shared common vision which is following company's strategy and involvement of everyone leads to greater success.

5. Team learning is about development on individual and group member, where everyone is learning and obtaining new knowledge through trainings, interaction with each other, sharing of ideas and opinions. This contributes greatly to the development of organizational knowledge base.

American researcher M. Pedler identified 11 characteristics for learning organizations such as:

1. learning approach to strategy - strategies can be transformed and changed based on the situation, conditions of the internal and external environment;

2. participative policy making - involvement of employees into decision-making and contribution of everyone in organization such as sharing of knowledge and ideas is considered as beneficial;

3. information - access to external and internal environment sources of information brings more objectivity and clear understandings in the decision making process;

4. formative accounting and control - the learning processes are happening within the accounting and control in organization;

5. internal exchange - interdepartmental communication and interaction allows company to achieve consistent success inside the organization;

6. reward flexibility - ability to provide adequate remuneration based on the results and contribution of employees;

7. enabling structures - organizational structure should stimulate growth and development, and improve communication among the departments;

8. boundary workers as environmental scanners - employees are those who get knowledge from external environment and contribute to organizational development;

9. inter-company learning - the flow of knowledge to the company is ensured by stakeholders, training and development, various projects;

10. learning climate - culture which encourage employees to constantly develop their skills and knowledge, and provides resources for training and professional development;

11. self-development opportunities for all - availability of educational opportunities, providing support and planning these activities for employees career development.

In order to develop and stimulate the knowledge management in SMEs in Kazakhstan, the concept of learning organization and human capital sets long-term plans and develop preconditions for further shifts in the economy of the country. According to OECD human capital development measured through several factors including current level of investment into human capital within the boundaries, academic achievements and results of postsecondary education (table 17).

Based on the above table of OECD measures of human capital we can conclude that, it is possible to assess the level of investment into human capital development with the different perspectives for more clear understanding of input and outputs in the process which is related to human capital development. Although, these measures are not providing information on a company level. In the case of Kazakhstan, policy changes might have a great impact on the development of human capital. But before structural changes in policy, organizations should react immediately to the challenges of global competition and develop knowledge internally. Because of the relationship between knowledge competence and company performance, the key possibility for SMEs is to develop knowledge assets and knowledge capabilities.

The mentioned above idea of learning organization is desired type of the company which will be able to generate knowledge in the long-term, through the constant improvements and sustainability. Majority of SMEs of Kazakhstan are struggling because of current economic changes of the economy, and logically cut down their costs on human capital development which at the end might negatively affect organizational development in the long-term. Because it is not possible to implement all of the changes of required to create learning organization, SMEs should transform step-by-step which will lead to different approach of managing organizational knowledge.

Table17 - OECD measures on human capital

Investment in human capital	1-1. High-level qualification 1-1-1. Growth in university-level qualifications Growth in attainment
1	2
	levels in different fields 1-2. Graduation and enrollment rates 1-2-1. Trend in university-level graduation output 1-2-2. Contribution of international students to university graduate output 1-2-3. Entry rates into tertiary-type A education

Continuation of Table 17

1	2
	1-2-4. Entry rates at tertiary education compared to population leaving without completing tertiary education 1-3. Time invested in education 1-3-1. Instruction time per year 1-3-2. Number of hours per week spent on self-study or homework 1-4. Investment in education 1-4-1. Expenditure per student at different level of education 1-4-2. Percentage of GDP spent on educational institutions 1-4-3. Private and public expenditure 1-4-4. Public subsidies for education to households 1-4-5. Expenditure on core service, ancillary services, and R&D 1-4-6. Change in student numbers, expenditure, demographic forecasts, etc
Quality adjustment in human capital investments	2-1. PISA assessments 2-2. PUIAAC (Program for the international assessment of adult competencies)
Results of education	3-1. Matching of education to occupation 3-2. Labor market outcomes by age, gender, and educational attainment 3-3. Rates of return to education
Source - Adapted from source [141]	

The Program "Business Road Map - 2020" is the one that currently is creating conditions for the development of business both in financial and managerial aspects. One of the main aims of the program is the improvement of competencies of entrepreneurs and increase of productivity. In order to follow this direction further, entrepreneurs should be focusing on the areas of knowledge competence developed and discussed in this thesis, and also findings of quantitative analysis. Furthering the results of trainings organized through the program "Business Road Map - 2020" entrepreneurs should be developing organizations within the directions of knowledge competence obtainment to keep available knowledge in the organization and improve the use of knowledge.

3.2 Formation of approaches for managing knowledge competence in SMEs

Knowledge competence development in SMEs is very important not only in obtainment but also managing it. SMEs development of knowledge assets is possible when company decides to build on existing knowledge and develop it further. Depending on the type of organization, the development of knowledge assets could be different. But generally companies should generate and obtain as many knowledge assets as possible to be able to use them legally for the company development (figure 29).



Figure 29 - Knowledge assets

Source - Compiled by the author

1. Intellectual property - the result of any innovative activities is an intellectual property.

2. Patent is the type of intellectual property which allows company to gain monopoly for some period of time.

3. Know-how is the unique knowledge of the company in a particular field which differentiates it from another organization

4. Personal relationship is the level of comfort, trust and compassion among employees in the company

5. Product is the unique knowledge available to the company in order to produce new product which is different from competitors

6. Brand is the market recognition and customer loyalty to the company and its products.

7. Skills of employees - knowledge and skills that employees possess and which help them to achieve organizational and individual goals

8. Procedures - norms and standard activities that exist in the company in the form of explicit knowledge which is available for everyone

9. Working practices - operational activities of the company which makes the most efficient and effective use of available organizational knowledge and skills.

We can suggest to SMEs in Kazakhstan to rely more on internal sources of knowledge development, which can be costly but in long-term will help organization gain competencies in various areas. One of the easiest way to protect all investment into R&D, new product development, innovative product is through protection of intellectual property. If the company is not dealing with new product development, another way to generate new knowledge, would be from investment into human capital. This includes various training programmes, professional

development seminars etc. Retention of employees another issue that SMEs should address. The main feature of SMEs is the size. Company can employ 50 people or 150 people. This difference changes the input and area of each employee towards the achievement of company's goals. Therefore, understanding the clear picture of gaining of company knowledge is explaining the role of each employee in developing knowledge competence in the organization. Individual and group interactions aimed to share and exchange knowledge is one of the ways how company can develop its own knowledge assets with the minimum investment into other spheres of company activities. Knowledge capture and creation, sharing and dissemination, acquisition and application are the ways of changing tacit knowledge into explicit and making it available for everyone in the organization .

Learning capability

In order to use learning capability available to gain knowledge competence company's should introduce the effective training system which will fit the requirements of the company. This is related to knowledge-based human resource management practices. It stimulates the development of knowledge, affects motivation of employees and their work commitment. Apart from having effective training system to fit the needs of employees in organization, learning capability is also dealing with availability of explicit knowledge. Different programmes which ensure safe access to organizational knowledge stimulates learning process in the company. Having some level of independence by creating learning environment, SMEs are using opportunities of existing technologies. Therefore, support of simple IT systems is already crucial to develop learning capability. Moreover, creation of trust is occurs in the learning capability by sharing and learning in every-day routine operations and on specialised trainings. The good way for SMEs to develop its learning capability is by stimulating employees to participate and improve their professional development through various programmes and sources of funding. Human capital development is not possible without the utilization of IT support, that's why employees on different levels should have an access to needed programmes which will enable them to save, document and record available unique tacit knowledge and to transform it to explicit, which will make the organizational knowledge available to majority (figure 30). Knowledge-centered HR practices such as: internal and external company trainings, interdisciplinary team work and delegation of responsibility affects the knowledge development processes in the organizations. SMEs in Kazakhstan can work on creating the HR practices that will provide an opportunity for employees to share knowledge, create trust between the boss and subordinates. Leadership creates trust between different levels of company, which reduce any resistance to change or unwillingness to share tacit knowledge with colleagues.



Figure 30 - Learning capability

Source - Compiled by the author

Culture capability

Organizational culture is important for any organization and in SMEs in particular. The development of the awareness of own organizational culture capability is the key to understand all problems that it creates. It is well-known that in Kazakhstan, corporate culture is very influenced by national culture. Therefore, the identification of limitations of own culture creates possibilities for minimizing its negative influence and maximizing positive influence. It is important for SMEs to create an environment with shared values and norms because it will ensure that everyone feels like they belong to organization and it stimulates the development of trust among colleagues. Moreover, cooperation and openness are strongly rely on supportive environment that culture can provide for people working in organization (figure 31).

Strong identification with the particular company is possible through similarities of individual and organizational cultures. That's why SMEs in Kazakhstan should not rely only individual assessment and knowledge development based on own understandings but for creation of the right and supportive environment, culture is maximizing the positive outcome of that.



Figure 31 - Culture capability

Source - Compiled by the author

Communication capability

Communication capability in SMEs creates possibilities for knowledge transfer, exchange and sharing. Communication is essential to transfer tacit knowledge between individuals, generate and exchange ideas. In the case of Kazakhstani SMEs, we can suggest that creation of friendly and open environment stimulates the development of knowledge. Understanding of tacit knowledge for company's ability to gain competence in any field, makes obtained knowledge useful for organization in long-term if it was shared in order to produce new product or test the idea. Moreover, in this case the role of IT is increasing again because it allows companies to transform tacit knowledge into explicit (figure 32).

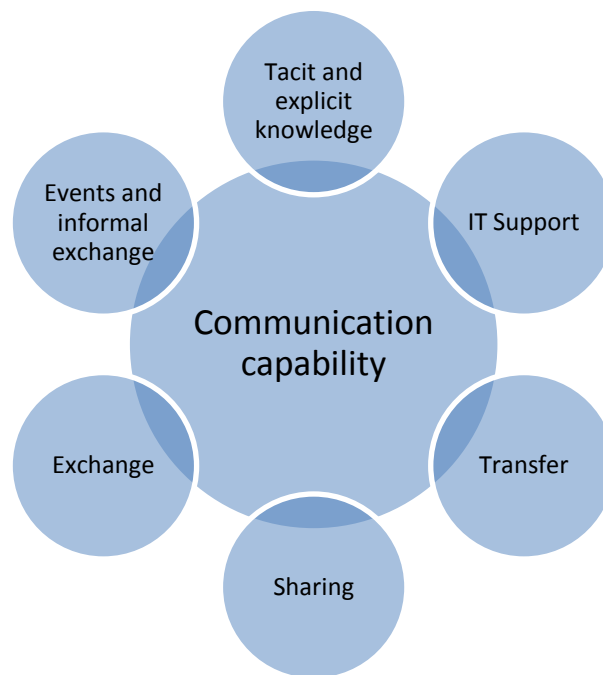


Figure 32 - Communication capability

Source - Compiled by the author

Innovation capability of SMEs is related to adaptability and acceptance of changing situations and environment. The ability to develop and use organizational knowledge requires flexibility which allows to use knowledge in different circumstances. It is obvious, that highly competitive environment makes companies to quickly adapt otherwise, company might lose its current position. In this case innovation capability helps organization to find right combinations of available resources and knowledge to produce new products or create process innovations (figure 33). Therefore, SMEs which are able to adapt and configure available knowledge in accordance with external environment are considered as the most adaptive who have an advantage in flexibility. The effect of knowledge on the ability of company to improve not only business performance but also innovation of product and processes. In the case of SMEs operating in Kazakhstan, the increased adaptability and flexibility might allow to use obtained knowledge more efficiently and effectively.

Through the development of knowledge assets and knowledge capabilities SMEs are able to manage its knowledge which at the end leads to gaining particular competencies in various areas. Our research on SMEs from different industries lead to another suggestion. It is impossible for companies to develop knowledge management without the use of information technologies. The result of our study indicate that majority of SMEs only rely on the internet and some of them on intranet in order to store and keep knowledge inside the organization. Although, mentioned suggestions are needed to maximize the use of knowledge capabilities, but also highlight the importance of IT in managing organizational knowledge and use of capabilities to exploit knowledge in SMEs.

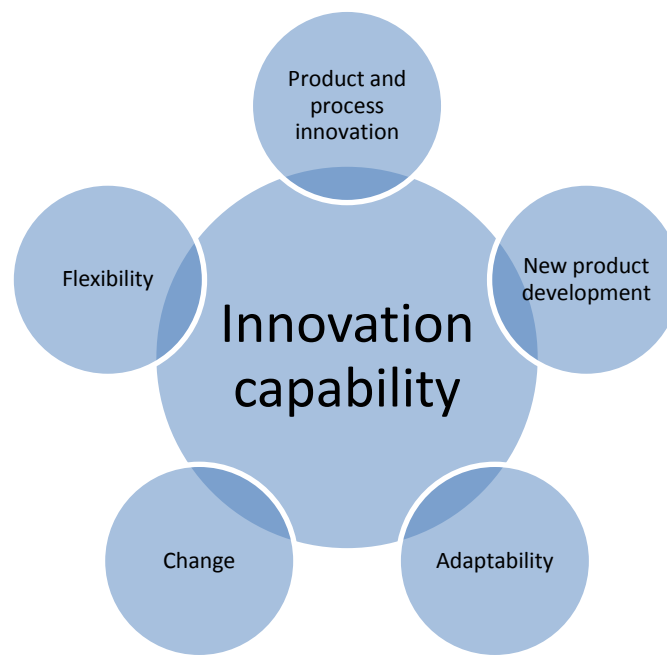


Figure 33 - Innovation capability

Source - Compiled by the author

In the case of SMEs in Kazakhstan, apart from capabilities to develop knowledge, the importance of the external sources such as networks, communities of practice are contributing to the knowledge development. Due to the nature of SMEs in its lack of available network structures strategic opportunities are decreased in comparison to bigger organizations. Therefore, the development of inter-organizational links to transfer and exchange knowledge and informal learning are important for the company's long-term development. According to OECD (2009) after financial crisis "emerging firms and those redesigning their processes should be encouraged to focus on sustainability and knowledge-based outcomes" [142, p.12]. In this sense, financial support and investment support should be there to reduce any risks for SMEs in knowledge generation and improving its activities. Recent changes in Kazakhstan economy put majority of SMEs under pressure that's why more complex and all-encompassing understanding of the SMEs, its peculiarities in knowledge management, and knowledge competence influence on company performance should be followed by higher risks associated with the intangible investments. Relying on theoretical and empirical findings, we can conclude that SMEs in Kazakhstan should develop internal capabilities which stimulate knowledge development to maximize an impact on company performance. Moreover, complex nature of knowledge requires the development of structures to sustain the adequate level of knowledge development and at the end the shift towards learning organization in knowledge-based economy.

3.3 Development of model of the impact of knowledge competence on company performance

Based on the analysis of the relationship of knowledge competence and company performance we propose the following model to analyze the relationship between factors in SMEs in Kazakhstan (figure 34).

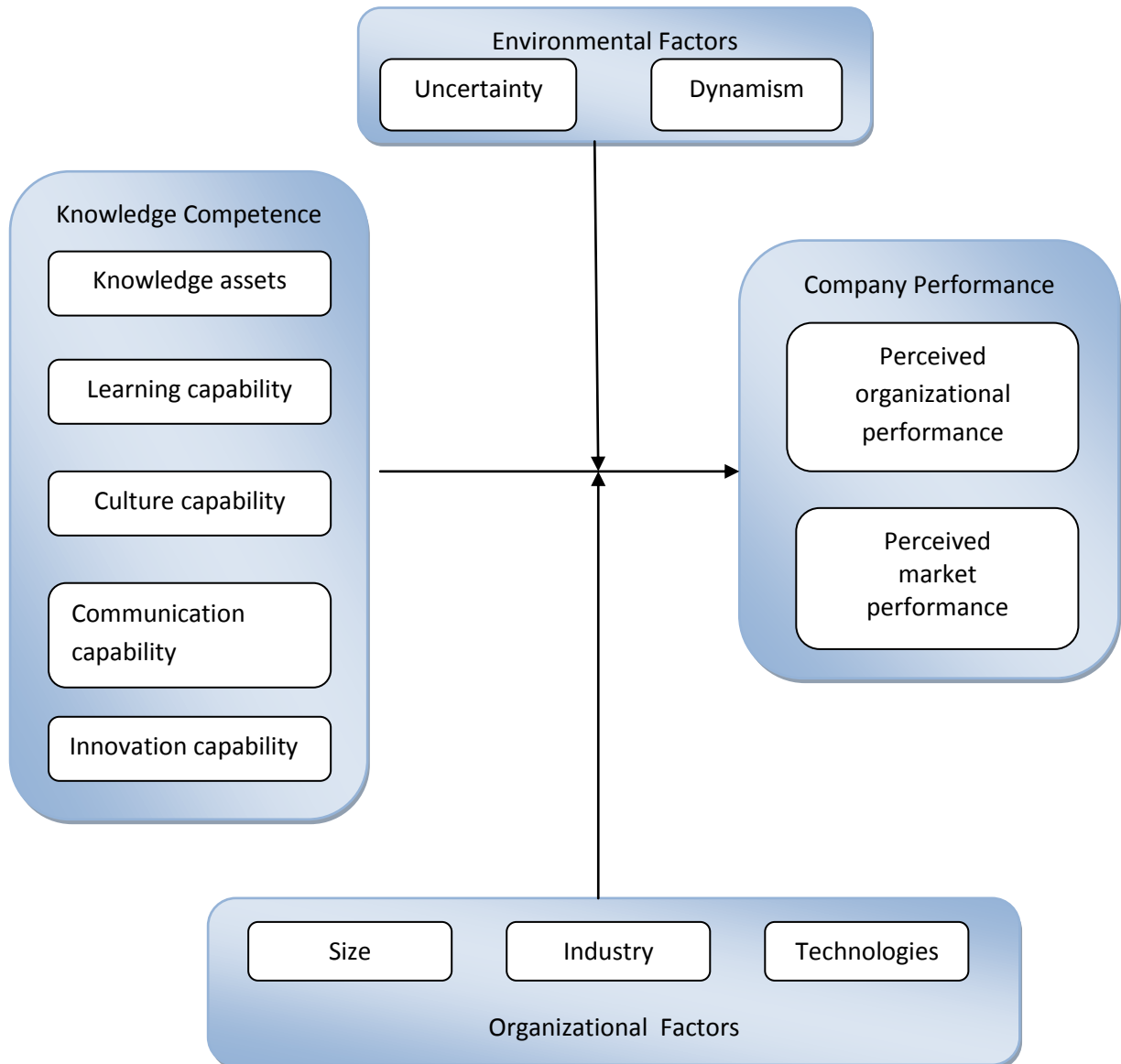


Figure 34 - Model of the impact of knowledge competence on company performance

Note - Compiled by the author

The purpose of this study is to examine the impact of knowledge competence on company performance. Specifically, this research sought to determine the impact of knowledge competence in SMEs in Kazakhstan. Environmental and organizational factors are moderating factors.

Methodology

Purpose of the research

This study is empirical. Obtaining of primary data results in empirical analysis. Moreover, research seeks to determine relationship between knowledge competence

and company performance. Survey used to examine the impact of knowledge competence on company performance statistically. In the next sections, research methodologies will be discussed in details.

Research Questions and Hypothesis

The study investigates the following research questions and hypotheses.

Research Question 1: Does knowledge competence has an impact on company performance in SMEs in Kazakhstan?

H1: Knowledge competence has an impact on company performance in SMEs in Kazakhstan.

Research Question 2: Which moderating factors can have an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan?

H2: Environmental uncertainty has an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan.

H3: Environmental dynamism has an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan

H4: Company industry has an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan.

H5: Company size has an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan.

H6: Technologies have an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan.

Data collection

Data collection is a crucial step to achieve research objectives. The method of data collection is important and determined by research method. In this research we used primary data. The primary data was collected through questionnaires. Primary data will provide us with statistical results of the impact of knowledge competence on company performance and more in-depth information about factors that affect relationship between knowledge competence and performance. The questionnaire has 52 questions.

Primary data

The primary data was gathered from the questionnaire of 103 respondents which work in different SMEs operating in different industries in Kazakhstan. Questionnaire are conducted with people in top position, financial directors or general directors or those who are related to knowledge processes in SMEs. The data from questionnaire is statistically analyzed to test above-mentioned hypotheses.

Data collection instrument

The pilot testing was done with selected sample of 30 companies to make it clear, solve confusing questions. The questionnaire was created using both open-ended questions and 5 - Likert type scale measuring knowledge competence, company performance and moderating variables. Respondents were asked to answer multiple question regarding knowledge competence and performance of their organization. The questions were sent to top and medium level managers who

have information about company's performance. Out of 250 SMEs in Almaty and other regions of Kazakhstan 103 answered the questionnaire.

Sampling procedure

For any type of research sampling procedure is an important step. For quantitative research sampling procedures require bigger population to draw conclusions that are valid and related to the study. Therefore, this study obtained information from 103 SMEs and analyzed it.

The sample population for the research consists of SMEs which operate in Kazakhstan from different industries. DAMU fund, Almaty Business Association provided support for sending out questionnaire to top level managers of SMEs in Kazakhstan.

Questionnaire design and variables

We conducted a pilot test of a questionnaire to obtain a feedback from participants about appropriateness questionnaire. The testing of an instrument resulted in restructuring questionnaire.

The questionnaire consisted of four parts. The first one is the general questions for the respondent, second part consists of questions related to knowledge competence (knowledge assets and knowledge capabilities), third part consists of questions related to company performance (organizational performance and market performance) and fourth part is environmental factors (uncertainty and dynamism). The questionnaire consists of 52 questions. The first part of a questionnaire consists of questions related to general information about participant and company including 2 open-ended questions. Second part of questionnaire divided into knowledge competence components: knowledge assets, learning capability, cultural capability, innovation capability and communication capability adapted from Chou and He (2004) and Pham and Hara (2011) [143,144]. The company performance part had questions related to perceived organizational performance and perceived market performance of an organization adapted from Delaney and Huselid (1996). Fourth part of the questionnaire had questions related to uncertainty were adopted from Khandwalla (1977) and dynamism of the environment adopted from Ibrayeva E. (1999) who was doing research on transitional economies like Kazakhstan and Kyrgyzstan [145, 146]. Respondents could choose one answer from five: strongly disagree, disagree, neither agree or disagree, agree, strongly agree. The one dependent variable is company performance which is perceived company performance of directors and managing directors of SMEs, as performance data (financial) is not widely open and companies were hesitant to share. Independent variable is knowledge competence which has several components such as knowledge assets and knowledge capabilities. In our study, we introduce moderating factors affecting the relationship between knowledge competence and company performance. Moderating factors such as industry, size, technologies, environmental dynamism and uncertainty could affect the relationship.

Data analysis techniques

We performed analysis of questionnaire by using SPSS Statistics for Windows 21.0. The correlation analysis, regression analysis and ANOVA were performed to analyze the data.

Limitation of the study

Research focuses on identification of the impact of knowledge on company performance in SMEs in Kazakhstan. The research provides statistical explanation of the impact of knowledge competence on company performance through subjectivism of performance through the financial knowledge about own company and industry where they operate of top managers in SMEs. This analysis has been carried out before currency devaluation in fall 2015. Moreover, we didn't look at labor force that companies are hiring. Due to the fact, that SMEs also can be different in number of workers, international partnerships, headquarter/subsidiaries these factors are not represented in our questionnaire. The data contains the valuable information on identifying internal availability of knowledge and capabilities to support them.

Omitted variable bias, reverse causality and instrumentation

There may be mechanisms that cannot be identified using collected data. For example, in case companies had strategic alliances, partnerships with other companies it could have resulted in knowledge development in organization, where on the other hand - lack of such kind of relationship could have affected the knowledge available for organization. The availability of technologies helping in managing of knowledge and company performance could be an issue with reverse causality. By having better performance companies can and do invest more in technologies as a way to improve efficiency and effectiveness. We instrument the knowledge assets and knowledge capabilities ranging on the Likert-scale.

Analysis and results of the study

In the tables bellow demographic information about the respondents and year of companies established are presented. More than 80% of our respondents were holding director position (table 18).

Table 18 - Position

Position	Percent
Director	82,5
Financial director	3,9
Managing director	4,9
Finance director	1,9
IT manager	1,9
Deputy director	1,9
Technical director	2,9
Total	100
Note - Compiled by the author	

Almost 90% of our respondents has undergraduate, around 9% were holding master or candidate of science degree (table 19).

Table 19 - Education

Education	Percent
High School	2,9
Undegraduate	87,4
Postgraduate	9,7
Total	100
Note - Compiled by the author	

The year of establishment showed that majority of SMEs were established in 2000 and 2009 (table 20).

Table 20 - Year established

Year Established	Percent
1	2
1988	1
1993	4,9
2000	31,1
2002	7,8
2003	8,7
2004	1,9
2009	22,3
2010	1
2011	16,5
2012	4,9
Total	100
Note - Compiled by the author	

Our dependent variable CP (Perceived Company Performance) was computed as the average of organizational performance and market performance items (a total of 8 items). Reliability analysis measured by Cronbach's alpha.

$$\alpha = \frac{N^2 \overline{cov}}{\sum s_{item}^2 + \sum cov_{item}}$$

Hair et al (1998) suggested that when value is 0.7 or higher measure items are considered as internally consistent [147]. The indicator alpha is increased when items are correlated to each other. It has shown that these items are internally

consistent. Cronbach's alpha of 0.823 indicate high internal consistency of the scale used to measure company performance (table 21).

Table 21- Reliability Statistics of company performance

Reliability Statistics	
Cronbach's Alpha	N of Items
0,823	8
Note - compiled by the author using SPSS Statistics for Windows 21.0 software	

Similarly, the reliability of knowledge competence scale was computed based on a total of 20 items reflecting the following dimensions:

- Experiential knowledge
- Routine knowledge
- Conceptual knowledge
- Systemic knowledge
- Learning capability
- Cultural capability
- Innovation capability
- Communication capability

Table 22 - Reliability Statistics of knowledge competence

Reliability Statistics	
Cronbach's Alpha	N of Items
0,929	30
Note - Compiled by the author using SPSS Statistics for Windows 21.0 software	

Cronbach's alpha of 0.929 indicates very high reliability (table 22).

We have also conducted reliability analysis for 2 factors that are supposed to play a moderate the impact of KC on CP.

Environmental Uncertainty (3 items, Cronbach's alpha=0.817) (table 23).

Table 23 - Reliability statistics of environmental uncertainty

Reliability Statistics	
Cronbach's Alpha	N of Items
0,817	3
Note - Compiled by the author using SPSS 21.0 software	

Environmental Dynamism (5 items, Cronbach's alpha=0.816) (table 24).

Table 24 - Reliability statistics of environmental dynamism

Reliability Statistics	
Cronbach's Alpha	N of Items
0,816	5
Note - Compiled by the author using SPSS Statistics for Windows 21.0 software	

Overall, the reliability analysis has confirmed that all the scales used in our analysis are internally consistent (Cronbach's alpha>0.8).

Impact of KC on CP

H_0 : Knowledge competence doesn't have an impact on company performance in SMEs in Kazakhstan

H_1 : Knowledge competence has an impact on company performance in SMEs in Kazakhstan.

$$H_0: \beta = 0$$

$$H_1: \beta \neq 0$$

We started with a simple linear model:

$$CP_i = b_0 + b_1 \times KC_i + \varepsilon_i$$

where ε_i is an error term

Table 25 - Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,682 ^a	0,464	0,459	0,37822
a. Predictors: (Constant), KC				
Note - Compiled by the author using SPSS Statistics for Windows 21.0 software				

This one-factor model allows explaining over around 46% of the CP's variance (R-square=0.464). The effect of KC on CP is statistically significant (the standardized regression coefficient indicates that a 1 standard deviation increase in KC is associated with a 0.682 standard deviations increase in CP (table 25,26).

$$CP = 1.064 + 0.73KC$$

$$(0.328) \quad (0.078)$$

This effect is statistically significant at 5% significance level (t=9.3, p-value<0.05) We reject our null hypothesis because coefficient t (9.35) greater than t statistical (1.98) (table 27). When independent variable increase by 1 unit the dependent will also increase by 0.73.

Table 26 - ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12,530	1	12,530	87,593	0,000 ^b
	Residual	14,448	101	0,143		
	Total	26,978	102			
a. Dependent Variable: CP b. Predictors: (Constant), KC Note - Compiled by the author using SPSS Statistics for Windows 21.0 software						

Table 27 - Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,064	0,328		3,25	0,002
	KC	0,733	0,078	0,682	9,359	0
a. Dependent Variable: CP Note - Compiled by the author using SPSS Statistics for Windows 21.0 software						

Then we accounted for the hypothesis that uncertainty and dynamism moderate the relationship between KC and CP by allowing the slope coefficient to vary depending in uncertainty and dynamism:

$$\begin{aligned}
 CP_i &= b_0 + (b_1 + b_2 \times \text{Dynamism} + b_3 \times \text{Uncertainty}) \times KC_i + \varepsilon_i \\
 &= b_0 + b_1 \times KC + b_2 \times \text{Dynamism} \times KC + b_3 \times \text{Uncertainty} \times KC + \varepsilon_i
 \end{aligned}$$

H_0 : Environmental uncertainty doesn't have an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan. We failed to reject null hypothesis, because t statistical is less than t critical.

H_0 : Environmental dynamism doesn't have an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan. We failed to reject null hypothesis, because t statistical is less than t critical.

To estimate model we calculated the interaction between variables (table 28).

There is a non significant relationship between EnvD_KC and CP, $b=0.0031$, 95% CI [-0.0283;0.0346], $t=0.1982$, $p=0.8433$. The results indicate that there is no moderate effect of environmental dynamism on the relationship between knowledge competence and company performance. P-value should be not more than 0.05, in our case p-value = 0.8433, t-test is 0.1982 which is less than 2. We failed to reject the null hypothesis.

There is a non significant relationship between EnvU_KC and CP, $b=0.0362$, 95% CI [-0.0019;0.0743], $t=1,8852$, $p=0.623$. The results indicate that there is no

moderate effect of environmental uncertainty on the relationship between knowledge competence and company performance. P-value should be not more than 0.05, in this model it is equals 0.0623, t-test is less than 2 and equals 1,88. We failed to reject the null hypothesis. Then we tested the hypothesis that firm size measured in the number of employees also moderates the relationship between KC and CP.

Table 28 - Model: Environmental Dynamism and Environmental Uncertainty

Model = 4						
Y = CP						
X = KC						
M1 = EnvD_KC						
M2 = EnvU_KC						
Sample size						
103						
Outcome: CP						
Model Summary						
R	R-sq	MSE	F	df1	df2	p
0,7217	0,5208	0,1306	35,5947	3,000	99,000	0,0000
Model						
	coeff	se	T	p	LLCI	ULCI
constant	1,5851	0,3698	4,2868	0,0000	0,8514	2,3188
EnvD_KC	0,0031	0,0158	0,1982	0,8433	-0,0283	0,0346
EnvU_KC	0,0362	0,0192	1,8852	0,0623	-0,0019	0,0743
KC	0,4597	0,1211	3,7970	0,0003	0,2195	0,7000
Note - Compiled by the author using SPSS Statistics for Windows 21.0 software						

We have created a dummy variable Emp50=1 if $1 \leq \text{number of employees} > 50$; Emp1=0 otherwise. We also tested the moderate effect of industry and technology on the relationship between KC and CP.

H_0 : Company industry doesn't have an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan. We failed to reject null hypothesis, because t statistical is less than t critical.

H_0 : Company size doesn't have an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan. We failed to reject null hypothesis, because t statistical is less than t critical.

H_0 : Technologies don't have an impact on relationship between knowledge competence and company performance in SMEs in Kazakhstan. We failed to reject null hypothesis, because t statistical is less than t critical.

There is a non significant relationship between KC and CP, $b=0.0033$, 95% CI [-0.0087;0.0153], $t=0.5452$, $p=0.5869$. The results indicate that there is no moderate effect of industry on the relationship between knowledge competence and company performance. P-value should be not more than 0.05, in this case it is 0.5869, and t is less than 2 and equals 0.5452. We failed to reject the null hypothesis. There is a non

significant relationship between KC and CP, $b=0.0818$, 95% CI $[-0.0261;0.1897]$, $t=1,5051$, $p=0.1355$. The results indicate that there is no moderate effect of company's size on the relationship between knowledge competence and company performance as p-value should be not more than 0.05. P-value is more than 0.05 and t is more than 2. We failed to reject the null hypothesis. There is a non significant relationship between KC and CP, $b=0.0416$, 95% CI $[-0.0175;0.1006]$, $t=1,3979$, $p=0.1653$. The results indicate that there is no moderate effect of technologies on the relationship between knowledge competence and company performance as p-value should be not more than 0.05. P-value is more than 0.05 and t is more than 2. We failed to reject the null hypothesis. We run one-way ANOVA test in order to prove that mean differences are statistically significant. Levene's test is testing whether or not the variance of groups are significantly different (tables 29).

Table 29- Model: industry, size and technologies

Model = 4						
Y = CP						
X = KC						
M1 = Industry						
M2 = Size						
M3 = Technologies						
Sample size						
	103					
Outcome: CP						
Model Summary						
R	R-sq	MSE	F	df1	df2	p
0,7043	0,4961	0,1387	23,8848	4,0000	98,0000	0,0000
Model						
	coeff	se	t	p	LLCI	ULCI
constant	0,8021	0,3815	2,1024	0,0381	0,0450	1,5593
Industry	,0033	,0061	,5452	,5869	-,0087	,0153
Size	,0818	,0544	1,5051	,1355	-,0261	,1897
Technologies	,0416	,0298	1,3979	,1653	-,0175	,1006
KC	,7419	,0793	9,3507	,0000	,5844	,8993
*****TOTAL EFFECT MODEL*****						
Outcome: CP						
Model Summary						
R	R-sq	MSE	F	df1	df2	p
0,6815	,4645	,1430	93,9133	1,000	101,0000	,0000
Model						
	coeff	se	t	p	LLCI	ULCI
constant	1,0645	,3229	3,2970	,0013	,4240	1,7050
KC	,7332	,0757	9,6909	,0000	,5831	,8833
Note - Compiled by the author using SPSS Statistics for Windows 21.0 software						

Table 30 - ANOVA

ANOVA					
CP					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20,463	37	0,568	5,758	0,000
Within Groups	6,515	66	0,099		
Total	26,978	103			

Note - Compiled by the author using SPSS Statistics for Windows 21.0 software

For the linear trend the F-ration is 5.75 and this value is significant at 0.000 level (table 30). Therefore, we can say that increase in knowledge competence, makes an increase in company performance proportionately

The means plot (figure 35) below represents the structure of the respondents' answers in the relation between knowledge competence and company performance.

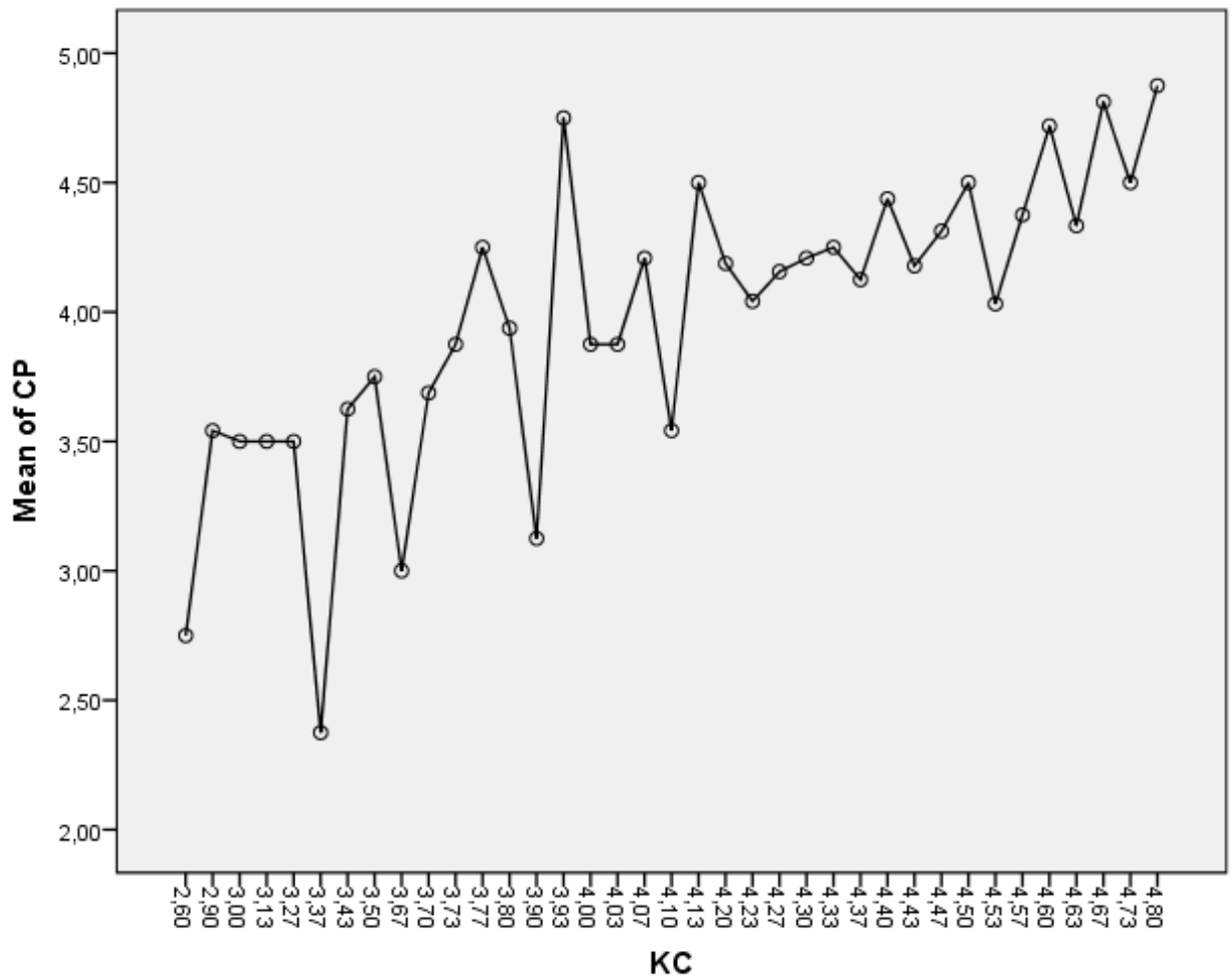


Figure 35 - The means plot

Note - Compiled by the author using SPSS Statistics for Windows 21.0 software

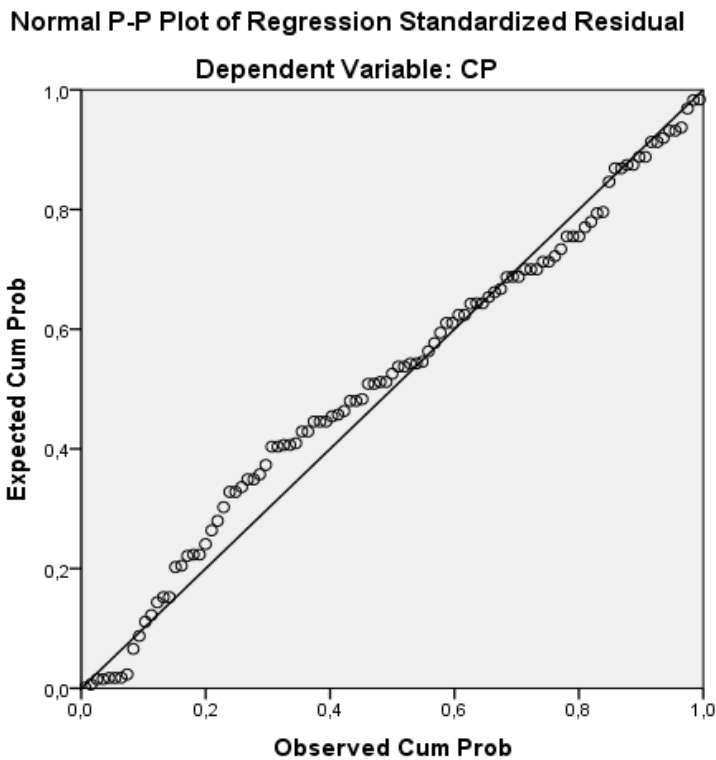


Figure 36- Normal P-P Plot of Regression Standardized Residual

Note - Compiled by the author using SPSS Statistics for Windows 21.0 software

The normal P-P plot of regression standardized residual represents the normality (figure 36). The scatter plot below represents predicted values which are allocated in accordance with our assumptions (figure 37).

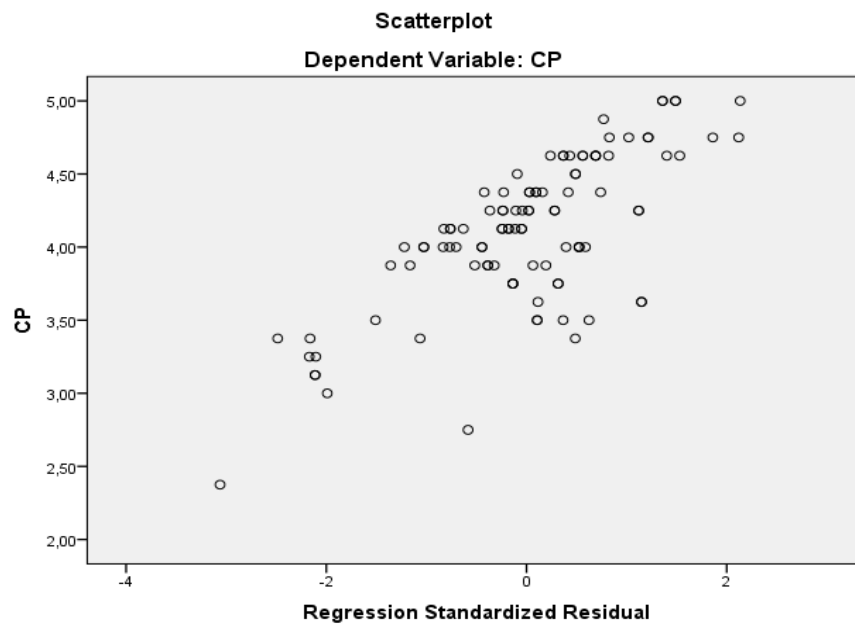


Figure 37 - Regression Standardized Residual

Note - Compiled by the author using SPSS Statistics for Windows 21.0 software

Correlation between knowledge competence components and company performance (table 31).

Table 31 - Correlations

Correlations							
		KA	LC	CulC	ComC	IC	CP
KA	Pearson Correlation	1	0,827**	0,684**	0,795**	0,597**	0,654**
	Sig. (2-tailed)		0,000	0,000	0,000	0,000	0,000
	N	103	103	103	103	103	103
LC	Pearson Correlation	0,827**	1	0,691**	0,625**	0,456**	0,649**
	Sig. (2-tailed)	0,000		0,000	0,000	0,000	0,000
	N	103	103	103	103	103	103
CulC	Pearson Correlation	0,684**	0,691**	1	0,479**	0,289**	0,424**
	Sig. (2-tailed)	0,000	0,000		0,000	0,003	0,000
	N	103	103	103	103	103	103
ComC	Pearson Correlation	0,795**	0,625**	0,479**	1	0,572**	0,488**
	Sig. (2-tailed)	0,000	0,000	0,000		0,000	0,000
	N	103	103	103	103	103	103
IC	Pearson Correlation	0,597**	0,456**	0,289**	0,572**	1	0,585**
	Sig. (2-tailed)	0,000	0,000	0,003	0,000		0,000
	N	103	103	103	103	103	103
CP	Pearson Correlation	0,654**	0,649**	0,424**	0,488**	0,585**	1
	Sig. (2-tailed)	0,000	0,000	0,000	0,000	0,000	
	N	103	103	103	103	103	103
**Correlation is significant at the 0.01 level (2-tailed)							
Note - Compiled by the author using SPSS Statistics for Windows 21.0 software							

Through this table, correlation between variables were studied. Company performance (CP) has strong relationship with knowledge assets (KA), learning capability (LC), culture capability (CulC), communication capability (ComC) and innovation capability (IC). Some of the relationships are stronger than others. The closer indicator to 1, the higher correlation. KA has the correlation 0.654 which is the highest among all components of knowledge competence; LC=0.649; CulC=0.424; ComC=0.488 and IC=0.585. The lowest is CulC which equals 0.424.

The study reveals that knowledge competence has an impact on company performance. The regression analysis reveals that when independent variable increase by 1 unit the dependent will also increase by 0.73. In research, we performed correlation analysis in order to understand how the knowledge competence components correlate with company performance The results confirmed

that there is a correlation and each of the components correlated differently. Based on that, the better correlation is between KA and CP. It confirms that knowledge assets which includes experiential knowledge, routine knowledge, conceptual knowledge and systemic knowledge as a main element of knowledge competence is affecting to CP. This is consistent with the literature on knowledge competence. The least it is correlated with culture capability. This confirms that even SMEs are limited in terms of their resources, the ability of organization to use knowledge helps company to improve their performance. The outcome shows that perceived organizational performance and perceived market performance both depend on knowledge assets and knowledge capabilities. Our results add to the growing empirical evidence that knowledge competence is always related to the company performance. Our results identified that mean differences between knowledge competence and company performance are significant and this reflected in the results of regression analysis and correlation analysis. Moreover, this is the first evidence on knowledge competence and company performance in Kazakhstan, and in Kazakhstan SMEs in particular. Our H_1 is confirmed. In the research we hypothesized the moderating effects of environmental factors such as uncertainty and dynamism on the relationship between company performance and knowledge competence H_2 and H_3 . We failed to reject our null hypotheses meaning that environmental dynamism and uncertainty not necessarily affect the relationship between knowledge competence and company performance. We can conclude that knowledge competence will improve company performance in the conditions of unstable environment and predictable environment. There is an empirical evidence that uncertainty doesn't have a moderating effect on firm performance and knowledge even when the relationship is positive. Examples of SMEs showed that there is no moderating effect on knowledge competence and company performance relationship as well in terms of organizational factors such as size, industry and technologies. This means that size of the company doesn't change the relationship between knowledge competence and company performance which is consistent with the research by Wu and Chen (2014) [148]. Although, it shapes the ability of the company to obtain new knowledge. The same study has also distinguished the different effect of industries on the knowledge. High-tech firms rely more on the knowledge therefore, they tend to use and invest heavily in knowledge development. Therefore, technologies also depend on the that. The results indicate that in the SMEs in Kazakhstan, the impact of knowledge competence does exist, although other organizational factors apart from size, industry and technology might affect this relationship. Moreover, the environmental factors such as dynamism and uncertainty make an influence on the relationship in any conditions. The results of our research indicate the level of the development of knowledge management in Kazakhstan. Because our study was on SMEs, where knowledge management processes are more informal, results indicate that moderating factors are not affecting the relationship because internally SMEs are struggling in getting knowledge competence elements work together to maximize its result on company performance. Difficulties faced by SMEs are explained by SMEs level of

management development and availability of financial resources which at the end affect SMEs technological development.

Summary for the third chapter

The results of model test showed that there is a relationship between knowledge competence and company performance. The elements of knowledge competence: knowledge assets, learning capability, innovation capability, culture capability and communication capability are affecting the relationship between company performance differently. The moderating effect of both environmental and organizational factors was not supported. Environmental factor such as dynamism and uncertainty don't moderate the relationship between knowledge competence and company performance. Organizational factors like size, industry and technologies don't moderate the relationship between knowledge competence and company performance. The reason we failed to reject our null hypotheses related to moderating factors lies in the sample and represent the situation in Kazakhstan. Moderating factors don't affect the relationship between independent and dependent variables due to the internal organizational problems that SMEs in Kazakhstan are facing. Because knowledge assets and knowledge capabilities are internal factors related to knowledge development inside the organization, the ability of a company to exploit its knowledge is characterized by knowledge capabilities. Correlation analysis identified different level of influence of each of the components of knowledge competence on company performance.

International experience shows the role of knowledge in SMEs around the world and draws the similarity as well as the differences between SMEs in Kazakhstan and internationally. Moreover, our empirical findings indicate the areas where SMEs should put more effort in order to develop knowledge and ensure long-term development of organization.

CONCLUSION

In this thesis theoretical aspects of theories contributed to the development of knowledge competence are considered, the role of knowledge in organization is identified and the relationship between knowledge competence and company performance is analyzed through the primary data, suggestions for Kazakhstani SMEs are presented after empirical analysis and analysis of international experience in issues related to organizational knowledge in competitive environments.

1. The key theories contributed to the knowledge competence are:

- resource-based view of the firm
- knowledge-based view of the firm
- competence-based view of the firm

Based on these theories, organizational knowledge is the main source for company's long-term development. Knowledge as an organizational asset has unique characteristics which belong only to a particular organization and when company is building on that knowledge it becomes company's source for competitive advantage. There is distinction between organizational competence and individual competence, although individual knowledge is contributing to organizational which at the end generates organizational knowledge base.

2. Theories of knowledge management are discussed extensively and the following is three generations of knowledge management were defined from the literature: first generation of knowledge management was based on the development of information technologies, including databases and repositories of knowledge and identifying company's knowledge assets; second generation of knowledge management was oriented and focused on creation of knowledge, through different processes including sharing, exchange, the concepts of communities of practices and concept of ba were introduced at that time; third generation of knowledge management aimed to generate new knowledge and create innovations. Knowledge management process and infrastructure capabilities were found out: knowledge management process capability-acquisition, conversion, application and protection of knowledge, knowledge management infrastructure - technology, organizational culture and organizational structure.

3. Concepts of knowledge sharing, knowledge transfer and knowledge exchange are analyzed in order to understand how is knowledge in the company is generated, and contributes to the growth of organizational knowledge.

4. This work contributes to the development of theory in knowledge management. The study on SMEs considers knowledge competence as a company's competence that helps to develop organizational knowledge base and the following definition of knowledge competence is created. Knowledge competence is the capability of the organization to use existing knowledge assets with the support of knowledge capabilities. . Based on the literature on knowledge competence, we identify four knowledge capabilities: learning capability, culture capability, communication capability and innovation capability. However, without knowledge

assets these capabilities don't have value to organization in terms of knowledge competence development.

5. Company performance can be measure differently, although the influence of the intellectual capital is always positive. Intellectual capital improves efficiency and effectiveness of performance, helps to develop creativity and new knowledge, unique to a particular company and very difficult to imitate by competitors which ensures advantage.

6. Categories of knowledge assets were identified and defined into four categories: experiential knowledge assets, conceptual knowledge assets, routine knowledge assets and systemic knowledge assets. The trust is essential for the development of each category of knowledge assets because it makes any communication happen which at the end contributes to organizational knowledge. Different levels of commitment to organization create different feelings within employees which at the end affects their ability to share, exchange and transfer knowledge in organization.

7. Model of the impact of knowledge competence on company performance was introduced to understand the relationship between independent and dependent variables and moderating factors.

8. The positive relationship between knowledge capabilities and company performance, including financial performance, market performance, were identified in both SMEs and large organizations.

9. Factors moderating the relationship between knowledge competence and company performance are environmental dynamism and uncertainty, size of organization, technologies used by the company and industry where company operates.

10. Our empirical analysis proved that there is an impact of knowledge competence on company performance in SMEs in Kazakhstan. Correlation analysis has confirmed that knowledge competence elements affect SMEs performance in Kazakhstan. Each of the factors correlates with company performance. The highest correlation with knowledge assets and lowest with culture capability.

11. Environmental and organizational factors don't moderate the relationship between knowledge competence and company performance. This indicates that in this sample these factors don't moderate the relationship. Moreover, research in SMEs in Kazakhstan has its own peculiarities which are characterized by the nature of SMEs in the country compared to other SMEs and large organizations around the world.

12. The relationship between knowledge competence and company performance indicated the level of the dependence on internal resources and capabilities in SMEs to improve the performance. Correlation analysis indicated the weakest and strongest factors that affect the performance of companies.

13. International experience in the area of knowledge development and building company's knowledge base related to creation of learning organization which can function independently but by cooperation with the external environment,

by building needed network for further development of organizational knowledge and development of organizational capabilities.

14. Categorization of SMEs in relationship to technologies (technology-driven SMEs, technology-following SMEs, technology-indifferent SMEs) available for the organization determines company's ability to use technology. In order to develop knowledge competence, technologies are considered as the main tool. But due to the nature of SMEs in Kazakhstan which normally don't rely a lot on technologies, what was proven by our research findings.

15. We suggested the possible ways for SMEs to develop knowledge assets and knowledge capabilities to increase its influence on company performance. In the conditions of economic instability and for the further shifts towards knowledge-based economy, investments in human capital development, ITC and knowledge management systems are the key success elements for long-term activities of SMEs.

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APPENDIX A

Date:

Dear Sir/Madam,

You are invited to participate in a research study titled “The Impact of Knowledge Competence on Company Performance of SMEs in Kazakhstan”. This survey is a part of PhD dissertation of PhD student at Kazakh British Technical University. Your participation in this survey is voluntary and your response will be anonymous. Thank you very much for your time and co-operation.

If you would like to have a feedback of the results of this survey, please send an email to diana_amirbekova@hotmail.com

Yours Sincerely,

Diana Amirbekova

Section I of the survey is related to general information about participant and company.

Please answer questions or put a tick mark in the appropriate box wherever required.

1. When was your company established?

2. What industry is your company involved in?

- Agriculture, forestry and fisheries
- Mining and quarrying
- Manufacturing
- Electricity, gas, steam and air conditioning
- Water; sewerage system, control over the collection and distribution of waste
- Construction
- Wholesale and retail trade; repair of motor vehicles and motorcycles
- Transportation and warehousing
- Accommodation and Food Services
- Information and Communication
- Financial and insurance activities
- Real estate
- Professional, scientific and technical activities
- Activities in the field of administrative and support services
- Public administration and defense; compulsory social security
- Education
- Health and social services
- Arts, entertainment and recreation
- Other service activities

- Activities of households as employers of domestic workers and production goods and services for personal consumption
- Activities of extraterritorial organizations and bodies
- Other, please specify: _____

3. Position _____

4. What is the highest degree or level of school you have completed?

- High school
- Undergraduate degree
- Other, specify please: _____

5. Number of employees in the company:

- 1-50
- 51-150
- 151-250
- Over 250

6. Which technologies your company had implemented?

- Internet
- Intranet
- E-commerce
- Data warehousing
- Knowledge management software
- Decision support system
- Data management system
- Automated manufacturing

If any other, please specify: _____

Section II of survey is related to the knowledge competence components. Please put a tick mark in the appropriate box.

1. Knowledge assets – all knowledge available to organization, including tacit knowledge which embedded in individuals and explicit knowledge which stored in manuals, documents and procedures.

1.1. Experiential knowledge

#	Question	<i>Strongly Disagree</i> <i>1</i>	<i>Disagree</i> <i>2</i>	<i>Neither agree nor disagree</i> <i>3</i>	<i>Agree</i> <i>4</i>	<i>Strongly Agree</i> <i>5</i>
1	Employees are					

	encouraged to share their hands-on experience					
2	Employees are willing to share their experience					
3	Employees are encouraged to express their emotional knowledge such as care and love					
4	Employees are encouraged to acquire and accumulate know-how through experience at work					

1.2. Routine knowledge

#	Question	<i>Strongly Disagree</i> <i>1</i>	<i>Disagree</i> <i>2</i>	<i>Neither agree nor disagree</i> <i>3</i>	<i>Agree</i> <i>4</i>	<i>Strongly Agree</i> <i>5</i>
1	Employees realise the importance of knowledge in routine operations					
2	Certain patterns of thinking and action are reinforced through continuous exercises					
3	High levels of participation are expected in capturing and transferring knowledge					
4	Employees are valued for their individual					

	expertise					
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1.3. Conceptual knowledge

#	Question	<i>Strongly Disagree</i> 1	<i>Disagree</i> 2	<i>Neither agree nor disagree</i> 3	<i>Agree</i> 4	<i>Strongly Agree</i> 5
1	Firms demonstrate design criteria by adopting images, symbols and language					
2	Firms demonstrate product characteristics by adopting images, symbols and language					
3	Firms demonstrate brand equity by adopting images, symbols, and language					
4	Employees are encouraged to interact with other organizations (e.g. partners, customers) to establish brand equity					

1.4. Systemic knowledge

#	Question	<i>Strongly Disagree</i> 1	<i>Disagree</i> 2	<i>Neither agree nor disagree</i> 3	<i>Agree</i> 4	<i>Strongly Agree</i> 5
1	Provide well-organized product documents					
2	Provide easy access to product database or catalog					

3	Restrict access to some sources of knowledge					
4	Clearly communicate the importance of protecting knowledge					

2. Knowledge capabilities

2.1. Learning capability

#	Question	<i>Strongly Disagree</i> 1	<i>Disagree</i> 2	<i>Neither agree nor disagree</i> 3	<i>Agree</i> 4	<i>Strongly Agree</i> 5
1	Company's explicit knowledge is stored for supporting business work					
2	Company has many specialists for supporting various works					
3	Any problem in the company can be solved quickly with current knowledge					
4	Company encourages self learning					
5	Company has an effective training system					

2.2 Cultural capability

#	Question	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neither agree nor disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
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		<i>Disagree</i> <i>1</i>	<i>2</i>	<i>disagree</i> <i>3</i>	<i>4</i>	<i>5</i>
1	Company has an open culture which accepts new ideas and innovation					
2	Company has ability to review itself and see things in different manner					
3	Company's culture creates trust for cooperation between employees					

2.3. Communication capability

#	Question	<i>Strongly</i> <i>Disagree</i> <i>1</i>	<i>Disagree</i> <i>2</i>	<i>Neither</i> <i>agree nor</i> <i>disagree</i> <i>3</i>	<i>Agree</i> <i>4</i>	<i>Strongly</i> <i>Agree</i> <i>5</i>
1	Company applies IT and modern IS for facilitating communication					
2	Company encourages idea exchange methods for creative ideas					
3	Company often organizes meetings for employees to share knowledge					

2.4. Innovation capability

#	Question	<i>Strongly</i> <i>Disagree</i>	<i>Disagree</i> <i>2</i>	<i>Neither</i> <i>agree nor</i> <i>disagree</i>	<i>Agree</i> <i>4</i>	<i>Strongly</i> <i>Agree</i>

		<i>1</i>		<i>3</i>		<i>5</i>
1	Company has ability to make change of its management system					
2	Company has flexible structure which can be changed if necessary					
3	Company can create adapted products/services for various customers					

Section III of survey is related to the company performance. Please put a tick mark in the appropriate box.

Company performance – improvements of financial and non-financial achievements of the organization in the last 3 years compared to their competitors.

3.1. Organizational performance

#	Question	<i>Strongly Disagree</i> <i>1</i>	<i>Disagree</i> <i>2</i>	<i>Neither agree nor disagree</i> <i>3</i>	<i>Agree</i> <i>4</i>	<i>Strongly Agree</i> <i>5</i>
1	Quality of products, services or programs					
2	Development of new products, services or programs					
3	Ability to attract essential employees					
4	Satisfaction of customers					
5	Relations among employees in general					

3.2. Market performance

#	Question	<i>Strongly Disagree 1</i>	<i>Disagree 2</i>	<i>Neither agree nor disagree 3</i>	<i>Agree 4</i>	<i>Strongly Agree 5</i>
1	Growth in sales					
2	Profitability					
3	Market share					

Section IV of survey is related to the environmental factors.

Please put a tick mark in the appropriate box.

4.1. Environmental uncertainty

#	Question	<i>Strongly Disagree 1</i>	<i>Disagree 2</i>	<i>Neither agree nor disagree 3</i>	<i>Agree 4</i>	<i>Strongly Agree 5</i>
1	Economic external environment of the company is stable					
2	Technological external environment of the company is stable					
3	Political environment of the company is stable					

4.2. Environmental dynamism

#	Question	<i>Strongly Disagree 1</i>	<i>Disagree 2</i>	<i>Neither agree nor disagree 3</i>	<i>Agree 4</i>	<i>Strongly Agree 5</i>
1	Company changes its marketing practices often to keep up with the market					
2	The rate at which products/services are getting obsolete in the industry is high					
3	Actions of competitors are easy to predict					

4	Demand and consumer tastes are fairly easy to forecast					
5	The technology of productions/services change often					

Приглашаем Вас принять участие в анкетировании по исследованию темы «Влияние компетенции знаний на результат деятельности в компаниях малого и среднего бизнеса в Казахстане» докторанта Казахстанско-Британского технического университета Амирбековой Д.

Ваше участие является добровольным и полностью анонимным.

Благодарю Вас за уделенное время и сотрудничество.

Если Вас интересуют результаты исследования, пожалуйста, отправьте запрос на электронный адрес: diana_amirbekova@hotmail.com

С уважением,

Амирбекова Диана

Дата заполнения _____ Регион (город/область)

I раздел. **Вопросы, связанные с общей информацией о компании и респонденте.**

Пожалуйста, ответьте на вопрос или поставьте галочку в соответствующем поле, где это требуется.

1. Год основания компании _____

2. Сфера деятельности компании

- Сельское, лесное и рыбное хозяйство
- Горнодобывающая промышленность и разработка карьеров
- Обрабатывающая промышленность
- Электроснабжение, подача газа, пара и воздушное кондиционирование
- Водоснабжение; канализационная система, контроль над сбором и распределением отходов
- Строительство
- Оптовая и розничная торговля; ремонт автомобилей и мотоциклов
- Транспорт и складирование
- Услуги по проживанию и питанию
- Информация и связь
- Финансовая и страховая деятельность
- Операции с недвижимым имуществом
- Профессиональная, научная и техническая деятельность
- Деятельность в области административного и вспомогательного обслуживания

- Государственное управление и оборона; обязательное социальное обеспечение
 - Образование
 - Здравоохранение и социальные услуги
 - Искусство, развлечения и отдых
 - Предоставление прочих видов услуг
 - Деятельность домашних хозяйств, нанимающих домашнюю прислугу и производящих товары и услуги для собственного потребления
 - Деятельность экстерриториальных организаций и органов
 - Другое, пожалуйста, укажите: _____
3. Должность _____
4. Уровень Вашего образования
- Среднее (школа)
 - Высшее (бакалавриат)
 - Другое, пожалуйста укажите: _____
5. Количество работников в вашей компании:
- 1-50
 - 51-150
 - 151-250
 - Более 250
6. Компания использует следующие технологии:
- Интернет
 - Интранет
 - Электронная коммерция
 - Хранилище данных
 - Программное обеспечение для управления знаниями
 - Система поддержки принятия решения
 - Система управления данными
 - Автоматизированное производство
 - Другое, пожалуйста, укажите: _____

II раздел. **Вопросы связаны с компонентами компетенции знаний (активы знаний, возможности знаний).**

Пожалуйста, поставьте галочку в соответствующем поле.

1. Активы знаний – знания, доступные организации, в том числе **явные**, которые записаны и хранятся в документах, и **неявные** знания, которыми обладают люди, их сложно выразить в письменной форме, они приобретаются на личном опыте.

1.1. Знания, основанные на опыте

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Компания приветствует, когда сотрудники делятся своим практическим опытом					
2	Сотрудники всегда готовы делиться своим опытом					
3	Компания приветствует, когда сотрудники демонстрируют свои эмоциональные знания, такие как забота и любовь					
4	Компания приветствует приобретение и накопление ноу-хау через опыт в работе					

1.2. Рутинные знания

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Сотрудники понимают важность знаний в рутинных операциях					
2	Некоторые модели мышления и действий усилены					

	через постоянные упражнения					
3	Во время получения и передачи знаний компания ожидает высокий уровень вовлеченности каждого сотрудника					
4	Компания ценит сотрудников за их индивидуальный опыт					

1.3. Концептуальные знания

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Особенности критерий дизайна компании отражаются через изображения, символы и язык					
2	Особенности продукции компании отражаются через изображения, символы и язык					
3	Особенности бренда компании отражаются через					

	изображения символы и язык					
#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полно стью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
4	Компания приветствует взаимодействие с другими организациями (например, партнерами или клиентами) для определения особенностей продукции					

1.4. Систематические знания

#	Вопрос	<i>Полно стью не согласен</i>	<i>Не согласе н</i>	<i>Ни «согласен », ни «не согласен»</i>	<i>Согласе н</i>	<i>Полно стью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Документация по продукции систематизирова на и организована					
2	Доступ к базе данных или каталогу легко доступен					
3	К некоторым источникам знаний доступ ограничен					
4	Сотрудники осведомлены о важности защиты					

	знаний					
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2. Возможности знаний

Возможности, позволяющие знаниям становиться компетенцией.

2.1. Возможность обучения

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Для поддержания работы компания хранит явные знания					
2	Для разного вида работ компания имеет достаточное количество специалистов					
3	Любая проблема решается быстро, с использованием имеющихся знаний компании					
4	Компания приветствует самообразование					
5	Компания имеет эффективную систему тренингов					

2.2. Возможность культуры

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>

				<i>согласен»</i>		
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Компания имеет открытую культуру, которая принимает новые идеи и инновации					
2	Компании способна проводить самооценку и принимать соответствующие меры в целях корректировки					
3	Организационная культура создает доверие для сотрудничества между работниками					

2.3. Возможность коммуникаций

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Компания использует информационные технологии и современные информационные системы для содействия коммуникации					
2	Компания					

	приветствуют методы обмена идеями для разработки креативных идей					
3	Компания часто организует встречи на которых работники могут делиться знаниями					

2.4. Возможность инноваций

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Компания имеет возможность провести изменения в системе управления					
2	Компания имеет гибкую структуру, которая может быть изменена в случае необходимости					
3	Компания может создавать адаптированные продукты/услуги для различных клиентов					

III раздел. Вопросы связаны с результатами деятельности компании. Пожалуйста, поставьте галочку в соответствующем поле.

Результаты деятельности компании – улучшение финансовых и нефинансовых показателей организации за последние 3 года в сравнении с конкурентами на рынке.

3.1. Организационная деятельность

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Производство качественных продуктов, услуг или программ					
2	Разработка новых продуктов, услуг или					
3	Привлечение необходимых сотрудников					
4	Удовлетворение покупателей					
5	Отношения между сотрудниками в целом					

3.2. Деятельность на рынке

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Рост продаж					
2	Рентабельность					
3	Доля на рынке					

IV раздел. **Вопросы связаны с факторами внешней среды.**

Пожалуйста, поставьте галочку в соответствующем поле.

4.1. Неопределенность внешней среды

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Экономическая внешняя среда компании стабильна					
2	Технологическая внешняя среда компании стабильна					
3	Политическая внешняя среда компании стабильна					

4.2. Динамизм внешней среды

#	Вопрос	<i>Полностью не согласен</i>	<i>Не согласен</i>	<i>Ни «согласен», ни «не согласен»</i>	<i>Согласен</i>	<i>Полностью согласен</i>
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
1	Компания часто меняет маркетинговые действия, чтобы соответствовать рынку					
2	Уровень устаревания продуктов/услуг на рынке достаточно высок					
3	Действия конкурентов легко					

	предсказуемы					
4	Спрос и предпочтения покупателей легко предсказуемы					
5	Технологии производства/услуг меняются часто на рынке					

АКТ ВНЕДРЕНИЯ
результатов диссертационного исследования докторанта PhD
Амирбековой Д.К. на тему «The Impact of Knowledge Competence on
Company Performance of Small and Medium Enterprises in Kazakhstan»

ТОО «Институт инжиниринга и информационных технологий» совместно с Национальной Палатой Предпринимателей «Атамекен» участвует в проекте «Деловые связи» на оказание поддержки субъектам малого и среднего предпринимательства, осуществляющим свою деятельность в приоритетных секторах экономики в рамках программы «Дорожная карта бизнеса 2020». Количество участников программы составило 550 человек в 9 городах Республики Казахстан (программа прилагается).

Настоящим подтверждаю, что результаты диссертации Амирбековой Дианы Кайратовны, на тему «The Impact of Knowledge Competence on Company Performance of Small and Medium Enterprises in Kazakhstan» были внедрены в проведение тренингов и вебинаров для руководителей МСБ в проектах 2016-2017гг., 2017-2018гг., а именно по следующим темам:

- Инновационный менеджмент и управление изменениями;
- Управление персоналом;
- Управление инновациями и изменениями (вебинар).

Для проведения тренингов Амирбековой Д.К. был предоставлен материал и проведены занятия на основе выводов и рекомендаций, полученных в диссертации:

- Анализ основных тенденций и проблем развития МСБ в Казахстане;
- Развитие основных компетенций знаний для повышения конкурентного преимущества компании;
- Определение сдерживающих факторов, таких как технологии, размер предприятия, индустрия, динамизм и неопределенность внешней среды, влияющих на развитие компаний.

Представленный материал характеризуется обширным списком использованной литературы, наличием доказательной базы (опросы и результаты анализа).

Генеральный директор
ТОО «Институт инжиниринга
и информационных технологий»



Ж. Х. Хасенов

«6» сентября 2017г.

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Программа проекта «Деловые связи»

	Предмет	Академ. часы
	<i>Модуль 1. Управленческие компетенции и др. (1-ая неделя)</i>	
D1	Базовые управленческие компетенции Тайм-менеджмент. Структура и планирование делового дня бизнесмена. Стресс-менеджмент	4 4
D2	Презентация своей компании или продукта Эффективные презентации	4 4
D3	Инновационный менеджмент и управление изменениями Развитие лидерских качеств	4 4
D4	Планирование и психология переговорного процесса. Технология переговоров Управление персоналом	4 4
D5	Ведение переговоров с иностранными партнерами Клиентоориентирование	4 4
	<i>Модуль 2. Компетенции в области внешнеэкономических связей и др. (2-ая неделя)</i>	
D6	Основы экономики Европейского Союза и Германии (объединенная) Поиск иностранных партнеров	4 4
D7	Управление качеством Международный проектный менеджмент	4 4
D8	Технико-экономическое обоснование Подготовка запроса и проекта договора для иностранной компании	4 4
D9	Бизнес-планирование. Ключевые параметры предприятия Основные вопросы международного сотрудничества	4 4
D10	Построение бизнес плана и представление бизнес-идеи	4 + 4
	Итого:	80
	<i>Модуль 3. Online-семинары и консультации (3-я и 4-ая недели)</i>	
OD1	Финансовое обеспечение бизнес-проектов Управление инновациями и изменениями	4 4
OD2	Коммерция и система продаж Маркетинг	4 4
OD3	Оформление презентаций Правовые вопросы в предпринимательстве	4 4
OD4	Управление проектами и логистика	8
OD5	Презентация бизнес-плана	4 + 4
	Итого:	40

«ҚАЗАҚСТАН-БРИТАН
ТЕХНИКАЛЫҚ УНИВЕРСИТЕТІ»
АКЦИОНЕРЛІК ҚОҒАМЫ



АКЦИОНЕРНОЕ ОБЩЕСТВО
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19.09.2017 № 14-21/1205

АКТ

О внедрении результатов диссертационного исследования докторанта Амирбековой Дианы Кайратовны на тему «The Impact of Knowledge Competence on Company Performance of Small and Medium Enterprises in Kazakhstan»

Материалы, основные положения и результаты диссертационного исследования докторанта Амирбековой Дианы Кайратовны на тему: «The Impact of Knowledge Competence on Company Performance of Small and Medium Enterprises in Kazakhstan», были внедрены в учебный процесс Бизнес Школы при преподавании дисциплин «Innovation Management», «Strategic Management» и «Introduction to Management» для студентов специальностей «Менеджмент» и «Финансы» в 2015 - 2016 уч.г. и 2016 - 2017 уч.г.

Проректор по академическим вопросам
АО «КБТУ»
д.э.н., профессор



Т. Шакуликова

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КОСТАНАЙСКИЙ
ИНЖЕНЕРНО-
ЭКОНОМИЧЕСКИЙ
УНИВЕРСИТЕТ
им. М. ДУЛАТОВА

АКТ ВНЕДРЕНИЯ
результатов диссертационного исследования
Амирбековой Д.К. на тему «The Impact of Knowledge Competence on
Company Performance of Small and Medium Enterprises in Kazakhstan»

Результаты научного исследования Амирбековой Дианы Кайратовны были внедрены в учебный процесс Костанайского инженерно-экономического университета им. М. Дулатова при преподавании дисциплин «Менеджмент», «Управление персоналом» для студентов 2-го и 3-го курсов специальности «Менеджмент», «Финансы» и «Экономика». Данный материал представляет научный интерес, так как современные условия развития общества, такие как глобализация экономики, обострение рыночной конкуренции, доминирование технологий, основанных на новых знаниях, опыте, интеллекте, увеличение социальной ответственности бизнеса формируют основные компетенций у студентов и помогают выстроить эффективную образовательную систему. Рассмотренные вопросы в исследовании Амирбековой Д.К. обоснованы прикладным характером, практическими примерами, применимыми методами инноваций в управлении персоналом, которые отвечают запросам жизни и потребностям развития личности, общества и государства.

к.э.н., ассоциированный профессор,
Декан экономического факультета КИНЭУ



Г. Дамбаулова

Г. Дамбаулова 2017г.