XVII International Scientific Conference on Industrial Systems (IS'17)
Novi Sad, Serbia, October 4. – 6. 2017.
University of Novi Sad, Faculty of Technical Sciences,
Department for Industrial Engineering and Management
Available online at http://www.iim.ftn.uns.ac.rs/is17

Integrating SMEs into value networks: Benefits and limitations

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Abstract

This article presents a review of the literature on influence of network effects on Small and Medium Sized Enterprises (SMEs) performance. In the business sector the focus has moved from competing to cooperating within network. The creation of value is a significant issue in networked environment where all participants act together in the interests of realizing own and group business aims. Nowadays product and services become dematerialised, thus value chains itself no longer appropriate for analysing industrial processes. Value network concept covers source of value and complexity, it can be used as a tool with which to analyse many industries. SMEs present central part of these networks where they are surrounded with various stakeholders. The aim of this paper is to examine network effects on internal and external relations of SMEs in dynamic business environment.

Key words: *Small and Medium enterprises (SMEs), Networking, Value network*

1. INTRODUCTION

New technologies and modern business approaches are becoming powerful tools for companies to increase their competitiveness**.**

The complexity of new technologies usually goes beyond the capabilities of individual companies. Small and medium-sized enterprises, especially those that operate in less developed countries, usually do not have enough capacities to implement most modern technology and upgraded business models. Due to their limitations in finance, resources, expertise SMEs cannot achieve global success if they operate as individual company without interaction and cooperation with various stakeholders.

Networking of SMEs and support organizations aims to provide better conditions for achieving competitive advantage and better business results. Network need to be organized in the way to provide some kind of value for all their members.

Inter-organizational networks could play a significant role in both, the early research phases and commercialization on the market. There are several number of different network types such as clusters, associations, value networks, alliances, etc.

Early stage innovation networks are oriented towards early research, but value network are established to commercialize an innovation with other members in network providing own resources to achieve goals and co-create adding value.

This paper aims to examine benefits and limitations of SMEs integration into global value networks. The first step in their integration is reconfiguration of existing value chains. By examining the value chain of SMEs their value adding activities can be identified and examined in order to strength their competitive advantage and maximize profit.

Reconfiguring company's value chain represents a precondition for its further integration into external value networks. Value chain concept defined by Porter (1985) is suitable for most companies and author confirms validity and usefulness of this concept.

Nonetheless, digitalization has brought fundamental changes in organizing business activities within value chain, where companies can now communicate directly with their business partners and end users. Thus, company is not only a "link in the chain", it has an active role in value network environment.

Paper is organized as follows. The first chapter is introduction; then, in the second chapter authors examine value chain and value network concepts, their opportunities and challenges. In the next chapter there are examined limitations and barriers for SMEs in the process of integration into value network. In the end authors made concluding remarks and provide suggestions for further research**.**

2. FROM VALUE CHAINS TO VALUE NETWORKS

There are a large number of studies and research that examine channels and linkages among company and its stakeholders. Over the years it has been expanded and integrated with other fields such as logistic, procurement, communication, sales, etc.

Still, sometimes there is confusion about understanding different terms related to organizational flows within company and beyond. Based on literature review authors made distinction among following terms: distribution channel, supply chain, value chain and value network. Any of these concepts has not been replaced with any other, only it expanded and upgraded.

Distribution channels represent one way linear model that include the flow of goods from suppliers to customers [1].

Supply chains are also one way models but have two directions: the goods flow from suppliers to customers and the money flow from customers to suppliers [2].

On the other hand, value chain is not linear model, it represent set of interrelated activities for creating competitive advantage [3]. The difference between a value and a supply chain is that a supply chain is the process of all parties involved in fulfilling customer requests, while a value chain is a set of interrelated activities a company uses to create a competitive advantage. Limitations of this model are reflected in absence of feedback from participants and unidirectional way of product movements through the chain

On the other hand, value network is defined as a set of interrelated activities among all network participants [4]. The core of this concept is co-creation of value for all network members, directional movements of resources and communication among members with possibility of getting feedback in any moment.

This paper has aim to examine benefits and barriers for successful integration of SMEs into value network. Thus, the first step in that process is to investigate company's existing value chains and to provide suggestions for its reconfiguration in order to provide suitable condition for establishment of networking environment.

In the next section will be examined effects of value chain concept on effectiveness of organizations within the chain, especially focus will be put on SMEs structure and performances.

2.1. Value chain concept

The value chain as both a concept and tool has been developed by Porter to understand and analyses industry processes and flows [3] [5]. It has proved as a very efficient and useful mechanism for defining the linkages of activities within traditional industry, particularly manufacturing.

Every company's value chain is according to Porter (1985) constructed of nine categories of activities, which are linked in different ways (Figure 1) [3].

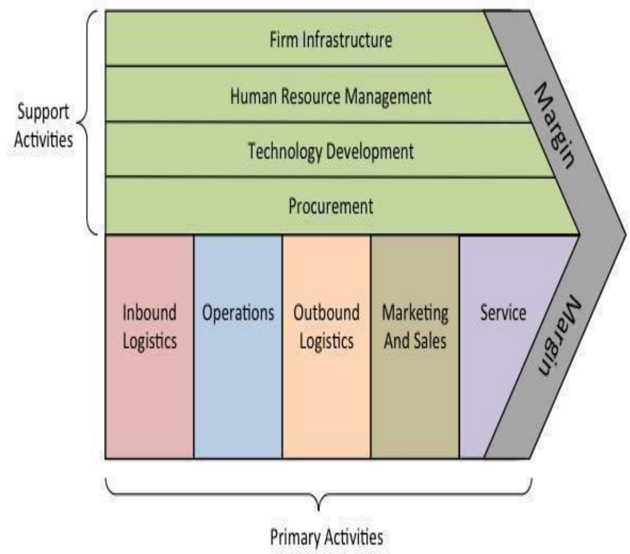

Figure 1. Value chain model [3]

Figure 1 shows primary and support activities of every company.

Primary activities are those processes that are directly involved with producing and supporting a delivered product or service Primary activities include inbound logistics, operations, outbound logistics, marketing and sales, and services.

Support activities enable each of the primary activities to take place. Support activities are related to firm infrastructure, human resources, technology development and procurement.

Reconfiguring a company's value chain is time consuming and a complex process. Porter (1985) states that are several areas to reconfigure value chains [3]:

- A new distribution channel or selling approach
- Forward integration to take over buyer functions or eliminate the channels
- Backward integration to control more determinants of product quality
- Adoption of an entirely new process technology

Norman and Ramirez state that value chain model is effective tool for positioning a firm in right place on the value chain [6]. It is used for analyzing the company and their major competitors in order to identify gaps between company's and competitor's performances, and to make plans to treat and close them.

Also, value chain concept uncovers sources of value. Due to digitalization value chains become more multi-dimensional and more complex. Products and services become more dematerialized, there is absence of physical dimension, and thus value chain as a concept becomes an inadequate tool for analyzing many modern industries.

Also, one of the main disadvantages of value chain concept is that it does not account for the nature of competitors and other participant in business network

2.2. Value network

Today's business environment is characterized by inter-organizational relationships that playing an important role in strategic performance [7]. It is created around activities required to produce end product and every company has own position in the chain.

Network or alliance is a voluntary arrangement among companies that exchange or share resources and that engage in the co-development or provision of products, services, or technologies [8].

Value network concept is defined and examined by many scholars and researchers. In order to provide better understanding of concept, authors showed definitions and statement of several authors. The idea of *value network* was pioneered by Norman and Ramirez in 1993. Thereafter several authors used and upgraded this concept - Clayton Christensen, Fjeldstad and Stabells, Cinzia Parolini, Verna Allee. Also, a concept of value network has been a research topics for many PhD and master thesis.

Norman and Ramirez (1993) defined value networks as a *„value creating system in which all involved stakeholders co-produce value".* They stated that reconfiguration of roles and relationships among network participants (suppliers, business partners, customers) are a key strategic task [6]. The right combination of network players can result in new value creation.

According to Clayton Christensen value network is "t*he collection of upstream suppliers, downstream channels to market, and ancillary providers that support a common business model within an industry" [9]*.

Fjeldstad & Stabell stated that value networks is a configuration which emphasize that the value being created is between customers when they interact facilitated by the value networks [10].

Modern concept of Value network is promoted by Verna Allee. She is a author of several books on topics including networking, value network, knowledge management, value conversion of intangibles. A value network is any set of roles and interactions in which people engage in both tangible and intangible exchanges to achieve economic or social good [4] [11]. Internal value networks include relationships between individuals, within and among work groups and between and among the various work groups that make up the organization [4].

External-facing value networks include those between the organization and its suppliers, its investors; its strategic business partners and its customers [4].Figure 2 presents example of one external value network.

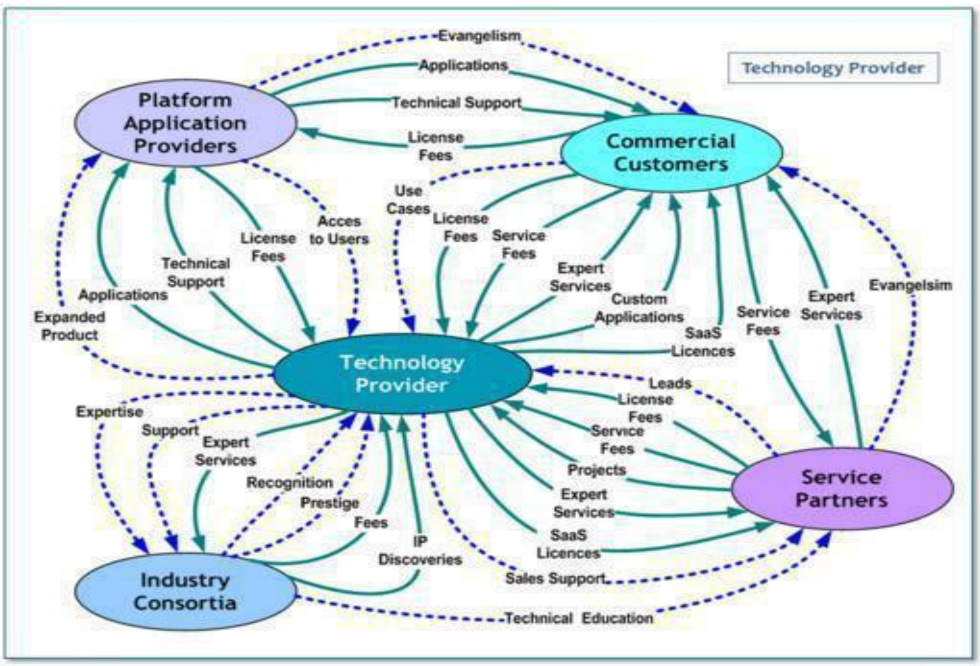

Figure 2. Value network model [4]

According to Figure 2 value network consists of number of various participants such as companies, research institutions, universities, government, and service providers. Central part of value network is virtual or physical platform. All participants in the value network are engaged in process of co-production of value.

Normann and Ramirez (1993) linked to its capacity in where it enables customers, to help and build relationships with its co-workers and suppliers, which result in a greater community that can accomplish something valuable.

With the value network concept, value is co-created by a combination of players in the network.

Value network participants co-create value together through different types of relationships In the value creation process, there exist three different relationships between parts of the organization [12].

- The first relationship is referred to as pooled relationship– all participants contribute together to create a whole.
- The second type of relationship is sequential kind of relationships. This is the part where sections of the organization produce parts, which are then put into another part.
- The third relationship is described as reciprocal relationship. In this case the output of each section of the organization are turned into inputs to sections from which they get their own inputs. This is the most complex relationship.

2.3. Value network vs. value chain

In Porter's (1985) value chain adding value is a linear process where participant A sells the output of his work to participant B, who adds value to it and sells it to participant C, who adds value to it and sells or passes it on to participant D until it is sold to the end customer [3].

When it comes to value network these relationships are not organized in such simple way, it tends to be more complex then make/sale process within the value chain. Norman and Ramirez (1993) believe that the value chain is a limited model and that the value network theory is more suitable for nowadays modern business processes [6].They observe value chain as a narrow-minded model that only views environment from one perspective while value network consider many different aspects.

Nonetheless, well-regulated value chain is an important precondition for successful integration of SMEs into value network. Allee (2008) state that reconfiguration of value chain is first step in the value network implementation [11].

Due to digitalization value network have a number of opportunities to grow and evolve as global business networks. Figure 4 presents a simple model which shows how value chains evolve into value networks. The main focus is put on linkages between different stakeholders within the network and their role in the network as a crucial element for co-creation of value

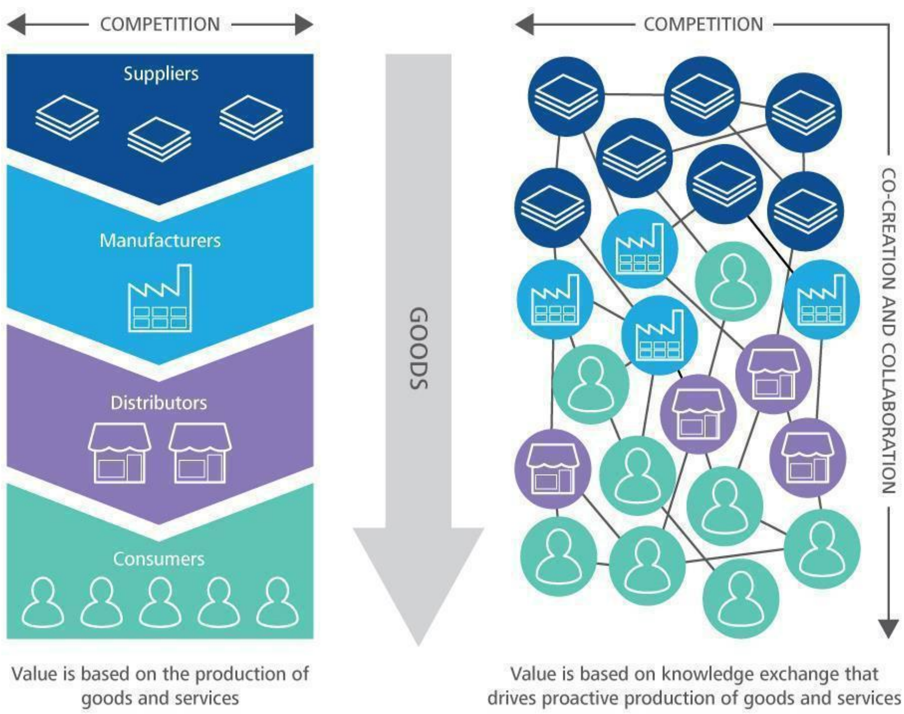

Figure 3. Value chains evolve into value webs [13]

Figure 3 compares value and supply chain with value network model. One of the main distinctions between two concepts is different understanding of competition. Value chain concept is based on business activities among competitors, so company cooperate with associate and competitor at same time. This way of doing business requires a lot of trust among business partners and their dedication to the concept as a whole. On the other hand, value network gathers collaborators; they do not compete with each other but with other business networks.

As presented in Figure 3, in the supply chain goods have a linear movement – from supplier to consumers. In value chain these movements are not only linear but they still have unidirectional way. Value network presents a set of interrelated activities with focal node that coordinate and control operations within the network.

Third and the most important difference between two concepts is issue of intangible assets. Value chain concept is not consider enough intangibles, but considering the fact of knowledge economy growth and development it was necessary to include these elements and upgrade concept in something that we now call value network.

Reconfiguration of value chains into value networks is a complex and long process but its benefits for companies are priceless [4]. However, it brings up the question how much time and resources is necessary for SMEs to get in process of reconfiguration of value chains. Due to limited finances and resources SMEs are facing with number of limitations to become a part of some complex value network, and this is especially true for small companies that operate in developing countries.

In the next chapter will be examined roles and characteristics of SMEs in the process of their integration into global value networks.

3. ROLE OF SMES IN THE VALUE NETWORK: BENEFITS AND BARRIERS

Today, it is very difficult for companies to meet international standard requirements and to provide their own technology and products offerings on the global market.

The reorganization of production at the international level and the development of global value chains are having significant effects on SMEs, in particular by expanding their business opportunities reaching international markets is a problematic and critical step for SMEs.

Lack of business skills and market knowledge coupled with the difficulty in accessing information and inadequate business development services result in number of [14].

Figure 4 represent obstacles to internationalization as perceived by SMEs. This research was done by Organisation for Economic Co-operation and Development (OECD).

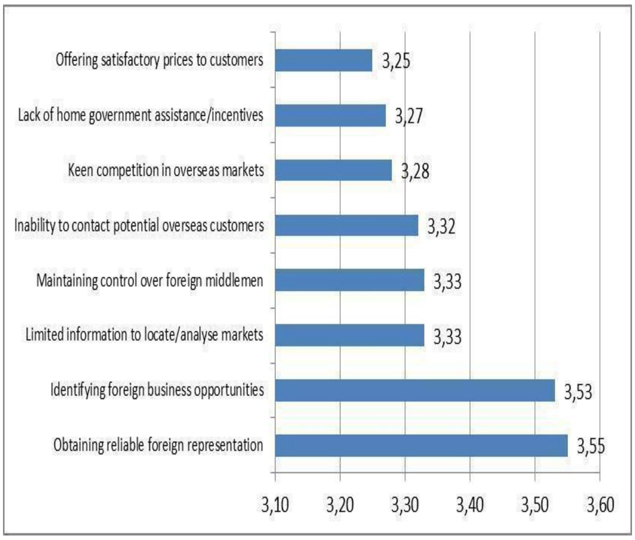

Figure 4. Obstacles to internationalization as perceived by SMEs [15]

According to Figure 4 it seems that small companies consider that their internal resources and capacities are not developed in that extent to be adequate for international markets as expressed by their perceptions of obstacles such as difficulty in identifying foreign business opportunities, maintaining control over foreign middlemen or accessing export distribution channels [15].

Regardless on fact that today's companies operate in high developed information-technology environment, one of the identified obstacles is inability to contact potential overseas customers.

In high developed countries there a number of companies that are prepared for internalization and reconfiguration of existing value chains in order to integrate its business into complex value networks. When it comes to developing countries, situation is a quite different. Due to various limitations such as lack of resources, expertise, finances SMEs are limited to increase their capabilities and to start with process of internalization. Strict requirements for implementation of international standards for quality, health and environment protection, technology, sales services slows down the process of SMEs internalization.

Also, institutional and judicial framework is in most cases inadequate to regulate business in SMEs. Legal requirements are affecting business operations as well. Astrakhan & Chepurenko (2003) state that the most usual barriers to SMEs in the process of integration into value network is access to finance which is extremely complicated for small companies [14].

Based on literature review most common barriers of SMEs exposure to international markets are identified. On the other hand, overcoming these challenges can provide successful integration of SMEs into value network and bring large number of benefits to them. Engagement in a mutually beneficial relationship with different stakeholders can help SMEs to first improve and then integrate their management skills, knowledge, and technology into international business networks.

4. CONCLUSION

Today, SMEs cannot operate as isolated entities, they are part of complex ecosystems in which are different organizations cooperate together and exchange products, services, information and knowledge. Due to digitalization, computer and communication technology represent central tools for supporting business activities among different participants in the network [16]. By utilizing modern network technology, distance between organisations is no longer so important.

The quality of the relationship between international contractors and their partners and suppliers is crucial in the process of integration into global value networks.

The paper aims to show challenges and benefits of integration of SMEs into value network. The first step in this process is reconfiguration of existing value chains in order to provide suitable conditions for fulfillment of strict requirements of international markets and global business networks.

The implications for future research are related to examination of all elements of the process of company's value chain reconfiguration that can affect its integration into value networks.

5. ACKNOWLEDGMENTS

This work was partially supported by the Ministry of Education, Science and Technology Development of the Republic Serbia under Grant number TR-35050, for the period 2011-2017.

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