A Literature Review on the Linkage between Supply Chain Challenges and Key Success Factors for Small and Medium Size Enterprises

The main aim of the paper is to review literature on supply chain challenges and key success factors for SMEs and to draw the theoretical linkage between the two phenomena. The narrative literature review is undertaken as a method of the research. The paper starts from the literature review on supply chain challenges which is followed by the analysis of key success factors of supply chains and SMEs. The findings reveal that SMEs are still locked in their own performance limitations and coping with their own success thus can hardly support the success of supply chain; however, solving their own success problems SMEs can become a valuable and supportive partner in the pursuit of success of the whole supply chain.

Keywords: supply chain, challenges, key success factors, small and medium size enterprises (SME).

Introduction

The current business environment at a large extent now is described as being a complex, dynamic system generating the need for adequate approaches in order to be successful. Globalization of business environment, dissolving trade boundaries, global business networking are opening new opportunities as well as new threats to large as well as to small and medium size enterprises (SMEs). The later ones having an inferior bargaining power, compared to those being in charge of global supply chains, are facing specific challenges and need to cope with their specific success limitations and to seek for their success factors in a context of evolving and developing global supply chains. The problem is dual one: supply chains are evolving and are facing their own challenges and their success is predetermined by specific key
success factors, while at the same time SMEs still are struggling with their own structural and capabilities limitations and the need to manage their own success factors. The questions rise about the compatibility or linkage between current supply chain challenges and success factors for SMEs. How these two phenomena correlate, i.e. can the key success factors of SMEs be a full or partial solution to current supply chain challenges? The majority of studies on supply chain challenges and its key success factors do not specify the size of enterprises being involved and being analysed; however, the large enterprise perspective dominates in these studies leaving the SMEs perspective opaque. Linking two research areas, that on supply chain challenges and key success factors of supply chains as well as that of key success factors for SMEs, the opacity of the role of SMEs in coping with supply chain challenges can be reduced. For the pursuit of these aims the object of the research have been defined – the theoretical link between supply chain challenges and key success factors for SMEs in today’s business environment. The main aim of the paper is to review literature on the linkage between supply chain challenges and key success factors for SMEs. The main aim of the paper is pursued through four objectives:

- to review literature on supply chain challenges and key success factors for supply chains in order to define the requirements to be met by SMEs intended to partner within supply chains;
- to review literature on key success factors for SMEs;
- to draw the linkage between current supply chain challenges and key success factors for SMEs.

The systematic literature review is undertaken as a method of the research that integrates content analysis and systematization of the findings.

The paper starts from the literature review on supply chain challenges, and then the analysis of key success factors of supply chains and SMEs follows. The paper ends with the drawing of the theoretical linkage between supply chain challenges and key success factors for SMEs, discussion on it and final conclusions.

Supply chain challenges

Supply chain management seeks to enhance competitive performance by closely integrating the internal-functions within an enterprise and effectively linking them with the operations of suppliers, customers and other supply chain members to be successful (Otchere et al., 2013). The supply chain is “...highly nonlinear, shows multi-scale behaviour, has a structure of spanning several scales and evolves and self-organizes through a complex interplay of its structure and function” (Surana et al., 2005) or it can be defined as a set of enterprises directly linked by one or more of upstream and downstream flows of products, services, finances and information from a source to a customer (Mentzer, 2001). Supply chain strategy must be aligned with overall business strategy. There are two major supply chain strategies: one focusing on operational excellence and the other – focusing on customer closeness (Morash, 2001). A study carried out by A. Morash (2001) revealed that demand side capabilities of customer service and quality tend to be more important for supply chain success than supply side capabilities such as cost, productivity
and delivery. In that context, with the three forces that are changing the supply chain management: proliferation of customer needs, shifts in the balance of power within the supply chain and changing strategic priorities (Anderson et al., 1997), it is expected that, in the demand driven markets, the greater bargaining power is concentrating in the downstream supply chain activities. However, it is argued that the power concentration is linked less to competitive advantage and more to enterprise ability to move value to its part of the supply chain while making themselves less replaceable, establishing themselves as guarantors of quality in the eyes of customers and leveraging their control over customers (Jacobdes, MacDuffie, 2013). In such context supply chain management seeks for internal and external integration of the flows of materials, information and funds at the same time extending traditional competitive priorities, such as quality, cost, delivery, flexibility and innovation, to areas such as globalization, risk, and sustainability (Sanders et al., 2011). The latter requires also a shared value system or a certain culture that dictates commitment, trust and reciprocal respect (Muller et al., 2011). The sustainability of product chain (through management of the whole product life cycle) is another sustainability challenge to be dealt with by small and medium sized enterprises where additional expertise and new information needs are limited (Vermeulen, Rar, 2006).

Supply chain integration can be defined as the extent to which all activities of an organization, its suppliers, customers, and other supply chain members are integrated together (Narasimhan et al., 1998). It has a positive impact on business performance and it provides benefits to the business such as information sharing, cost effectiveness, sustainable competitive advantage, customer satisfaction, business renovations, business process modelling, financial performance and others (AlSaheer et al., 2011). Supply chain integration can be realized only if the members of a supply chain work together (cooperate) on the basis of collaborative mutual beneficial relationships (Baleanu et al., 2009). Supply chain integration passes through five stages starting from starting point (organizing a supply chain), going through functional and internal integrations, external integration towards strategic integration, i.e. towards increasing interdependency among supply chain processes and members (Christopher, 2005; Melnyk et al., 2009). Higher levels of external integration (including strategic integration) are characterized by increased logistics related communication, greater coordination of logistics activities with those of suppliers and customers and more blurred organizational distinction between the logistics activities of the enterprise and those of suppliers and customers (Stock et al., 2000; Handley and Benton, 2013). There are six main groups of obstacles that inhibit supply chain transformation towards a strategically integrated supply chain: lack of strategic visibility and alignment; shortage of talent management and leadership in the field of a supply chain; limited models for supply chain optimization, risk minimization and cost; lack of process orientation with information sharing and integrating measures; underdevelopment of relationships and lack of trust; limitations of existing methodologies of supply chain network design, including optimization and real time information and visibility (Melnyk et al., 2009; Speier et al., 2011). Supply chain
integration faces challenges of big market uncertainties, inability to co-ordinate several activities and the members of a supply chain; moreover, customers demand for better quality, higher level of service and reduced prices (Otchere et al., 2013; Baleanu et al., 2009; Evrard-Samuel, 2008; Mishra, 2011; Morya and Dwivedi, 2009).

Global supply chains are dynamic complex systems. Their dynamic nature creates an on-going need for its members to adapt as the environment changes (Defee, 2006). The direction and speed of change is often driven by a member whose bargaining power is the strongest even if the shift from adversarial relationships to increasingly cooperative and collaborative are becoming more common (Whipple, Frankel, 2000; De Toni et al., 1995). In that context small and medium sized enterprises can be placed at a disadvantage as having limited bargaining power among supply chain members. Small and medium sized enterprises may need to extend their capabilities to be successful in those supply chains by undertaking non-equity strategic alliances (clusters, other non-equity cooperation forms) (Defee, 2006; Danese et al., 2009). A non-equity strategic alliance is a mode of foreign market entry that provides the possibility to increase the control over quality of products produced and services rendered that allows an enterprise to achieve higher returns at the same time sharing the risks. Compared with other modes of foreign market entry (exporting, licensing, franchising, wholly owned subsidiary) evolving from the lowest (exporting) towards the highest degree of control, cost and risk (wholly owned subsidiary), non-equity strategic alliances seems to be an optimal mode in terms of small and medium sized enterprises managerial and financial resources. Creating e-clusters as well as traditional ones, as forms of non-equity strategic alliances, there are challenges for small and medium sized enterprises as they do not have capabilities and resources in terms of staff, capital and technology to manage cluster creation processes (Danese, 2009).

Increasing global cooperation, vertical disintegration and concentration on core competencies have reshaped business environment into networks of trust, where information must be shared in a transparent manner (Ahlstedt, Hameri, 2004; Kumar et al., 2013). In those global networks of trust small and medium sized enterprises can add value to their supply chain members’ relationships by acting in a trustworthy manner in case it has attitudinal fit with those members (Mishra, 2011). Trust, cooperation and proper information flow are pillars that strengthen the buyer-supplier relationship within a supply chain and support sustainability of a supply chain (Mishra, 2011; Kumar et al., 2013; Chen and Poulraj, 2004). Supply chain members-leaders start emphasizing the enhancement of supply chain processes in order to satisfy customers faster than their competitors and generate value for themselves as well as for all the members of their supply chain (Morya, Dwivedi, 2009). At the same time local networks of suppliers can guarantee flexibility and speed of supplies (Chiarvesio et al., 2010).

Supply chain flexibility is becoming a central issue in the strategy of small and medium sized enterprises. Volatile markets, highly aware customers, customized products, a short product life cycle and short time lead to uncertainty (Kumar et al., 2013; Schnetzler et al., 2004). That challenge can be coped with greater flexibility that reflects the ability of a system...
to respond rapidly to changes occurring inside and outside the system (Garavelli, 2003). Time to market is becoming more and more important. That is supported by the findings that enterprises place more importance on consistency (quality and delivery) and the least importance on price while selecting supplier (Choi, Hartley, 1996; Blackburn, 2012). Supply side cost minimization (in terms of lower cost of suppliers) can result in poor product quality, longer lead times, additional supply chain costs and dissatisfied customers (Omar et al., 2012).

It was supposed that from 2009 till 2013 a price driven/strategically decoupled supply chain would transform into a value-driven/strategically-coupled supply chain (Melnyk et al., 2009). That transformation implies the challenges for supply chain management in the future: the need to cope with supply chain disruptions (Stock, 2009) and supply chain risk (Blos et al., 2010); the leadership within the supply chain (power balance within the supply chain); the importance to manage the timely delivery of goods and services; the need to innovate by drawing on the capabilities of the supply chain; and the need to implement appropriate information exchange technologies to increase supply chain visibility (Melnyk et al., 2009; Marucheck et al., 2011).

Key success factors for supply chains

Key success factors as the main enablers and inhibitors for the success of global supply are analysed from the perspectives of a global supply chain, the supply chain, and partnership. These approaches are used in order to find out the requirements being dictated to potential global supply chain suppliers in order to meet challenges being faced by global supply chains.

Global supply chains are supply chains developed and implemented at a global scale undertaking offshoring of production, inventories, suppliers and customers, and which are facing challenges of different economies, infrastructures, cultures and policies (Christopher, 2005; Schmidt and Wilhelm, 2000). The complexity of the context of global supply chains is reflected in the complexity of supply chains being implemented in that context. The global supply chains can be implemented using global base supply chain network or/and using local base supply chain network, i.e. integrating local suppliers (Thomas, Barton, 2007). If a global base supply network generates benefits of economies of scale (Motwani et al., 1998) the integration of local suppliers into the global supply chain generates benefits of increased products supply flexibility and improved supplier customer communication in specific product areas. According to A. Thomas and R. Barton (2007) the integration of local suppliers into the global network results in five distinctive advantages for local suppliers: greater understanding of their own manufacturing and servicing activities and in comparison with other suppliers; greater appreciation of technological level needed to compete in global markets; strong relationships with suppliers will create incentives for them to meet global supply chain requirements, i.e. to developed globally valued competencies; long term relationships allows local suppliers to develop the needed competencies in order to satisfy the global supply chain requirements; greater profit margins.

The mutual benefit in a global supply chain can be achieved through greater
Supply chain integration is considered being an essential element for enhancing supply chain competitiveness. In the literature review prepared by M. Kamal et al. (2014) there are factors enabling and inhibiting the supply chain integration identified. There are nine most cited factors driving the supply chain integration: improving performance; effective coordination and communication; facilitating information sharing, operational efficiency and performance; improved financial performance; effective customer service and responsiveness; improved products quality management and delivery; supply chain agility, flexibility and visibility. The factors inhibiting supply chain integration are the lack of unified information technology infrastructure; lack of technical resources, skills and knowledge integration; resistance to change; and lack in cross-trained experienced workforce. These statements are supported by the results of a case study carried out by R. McAdam and D. McCormack (2001) as they found that the integration of global supply chain success is based on communication of information within the supply chain members. According to S. E. Fawcett and G. M. Magnan (2002) it is important to discern three levels of supply chain management levels to be applied within a particular supply chain. They concluded that the simplest form of supply chain management is a simple application of new information technologies in order to increase the quality of information and communication speed. The linked information systems, integrative inter-organizational processes, aligned goals, consistent measures, shared risks and rewards, and cross-experienced managers are fundamental for the second level of supply chain management. The third level of supply chain management is based on the elements of two previous levels and put emphasis on cultural orientation or philosophy that guides decision making, i.e. the development of a common supply chain team. The importance of cultural integration is emphasized by M. S. Sangari et al. (2014). R. B. Handfield and E. L. Nichols Jr. (2004) put emphasis on a set of key factors in global supply management: trust in buyer-supplier relationships; communication; personalized relationships; positivity in buyer-supplier relationships; adequate and suitable information systems; inter-organizational and cross-functional participation; effectiveness and communication of suppliers performance measurement; sharing of information; sharing of right information with right people within the supply chain; long-term perspective and right people at the right positions. The importance of cross-functional interaction, usage of information and communication technologies and senior management commitment and involvement are emphasized in many studies (Tummala et al., 2006; Ngai et al., 2004; Gunasekaran and Ngai, 2004; Lu et al., 2006; Sangari et al., 2014).

According to R. J. Zelbst et al. (2009) the performance of supply chain management depends on the ability to develop long-term strategic relationships with supply chain partners in order to achieve customer satisfaction. Here collaboration shall be emphasized and implemented instead of control. However, supply chain collaboration is not the guaranty for the performance of the supply chain. In case of a coherent supply chain strategy, consisting of information exchange and structural collaboration with suppliers, the important supply chain performance gains can be achieved (Vereecke, Muylle, 2006).
The results of the survey implemented by P. Kess et al. (2010) among Hong Kong and Thailand enterprises revealed the key success factors for an effective business value chain. These factors are: willingness of suppliers to share the information; effective information and communication infrastructure of suppliers and that of customers; reliability of suppliers; collaborative and willing to share customers; reliability of production/service delivery system; and good operations management.

In 1994 the survey among Australian manufacturers was carried out by D. J. Power and A. S. Sohal. (2001). The results of the survey revealed that in order to implement an agile supply chain as an imperative in today’s business environment it is important to integrate closely suppliers in developing products, improving processes, quality initiatives; to adopt philosophy of continuous improvement; to use participative management style within the supply chain; to use technology to promote productivity, new product development and customer satisfaction (Power and Sohal, 2001).

According to the research results of M. Dupuis and N. Prime (1996) in order to achieve success in the retail sector supply chain three key success factors shall be fulfilled: innovativeness; harmonious relationships among supply chain partners; and adaptability in different cultural environments. These results are in principle supported by A. Fearne and D. Hughes (1999) research results as they found that there are five key success factors for successful partnership in the supply chain: supplier’s strategic orientation, organizational structure and business culture; its ability to exploit market information; ability to measure and control full costs; and ability to innovate. For retailers it is important that the suppliers would strive to meet customer requirements; would be willing and capable to innovate; would be trustworthy in order to share information; would be culturally compatible in order to develop long-term relationships; would be cost effective; and would demonstrate capabilities and competencies to innovate.

The success of global supply chains depends on the success of partnership as it was already identified. The partnership in supply chains is analysed from perspectives of business to business and buyer-supplier relationships, partnership development, and collaboration.

I.-L. Wu et al. (2014) argue that the supply chain performance depends on collaboration through information sharing that enables the collaboration itself. They continue that trust is important for the information sharing and collaboration between supply chain partners and it enables the development of a long-term collaborative strategy. The success of collaboration leads to future collaborations by helping supply chain partners to make investment decisions particularly to collaboration and to the level of further integration of their supply chains (Ramanathan, Gunasekaran, 2014). A higher level collaboration leads to higher operational performance (Simatupang, Sridharan, 2004; Fawcett et al., 2006; Srinivasan et al., 2011; Ramanathan, 2014; Skjoett-Larsen et al., 2003). Furthermore, transformational supplier has greater influence over operational performance than the supply chain leader (Defee et al., 2010). However, it is important for the buyer to engage into a different level of information sharing and collaboration with limited number of partners, i.e. to focus on strategically important partners (Thron et al., 2006).
The importance of collaboration in a supply chain is stressed in many researches. It is envisaged in order to enhance the buyer-supplier relationships, to improve the performance of a supply chain (Barratt, 2004). M. Barratt (2004) argues that collaboration in a supply chain is based on collaborative culture being development within the supply chain. The elements of that culture are trust, mutuality, information exchange, openness and communication. The collaborative culture leads to cross-functional collaboration, process alignment, joint decision making, and true supply chain metrics. In order to ensure the sustainability of collaboration partners must be ready to commit resources, to provide intra-organizational support (starting from senior management support), to focus on a supply chain, to demonstrate the business case, and do not overvalue the importance of information technologies.

The partnership success in a supply chain is dependent on trust, senior management support, the ability to meet performance expectations, clear goals, partner compatibility, and conflict as bargaining power (Brinkerhoff, 2002; Whipple, Frankel, 2000). R. M. Monczka et al. (1998) concluded that partnership success together with the trust depend on coordination, interdependence, information quality and participation, information sharing, joint problem solving, avoiding severe conflict resolution tactics, and the existence of a formal supplier selection process.

Trust among the supply chain partners is the main prerequisite for the effectiveness of a supply chain and it depends on confidentiality; honesty and integrity, work standards, politeness and friendliness, shared values, experience and qualifications, reliability, timeliness, customization, and information sharing (Tejpal et al., 2013).

The success of implementation of advanced manufacturing technologies in a supply chain is dependent upon team working (collaboration), top management involvement, cooperative relationships with customers and suppliers (Burgess et al., 1997).

The success of sub-supplier management in a sustainable supply chain depends on trust between a buying enterprise and direct supplier; trust between the direct supplier and sub-supplier; the buyer’s and direct supplier’s buyers-powers; committed long-term relationship between the direct supplier and sub-supplier; supply-know-how of the buyer; willingness of the direct supplier to disclosure sub-suppliers; involvement of the direct supplier; perceived value for direct and sub-suppliers; low risk of supplier-by-passing; the sub-supplier capability to comply with sustainability standards; as well as geographical and cultural distance between supply chain partners (Grimm et al., 2014).

The partnership with a supplier within the supply chain can result, in case of an insufficiently capable supplier, in the supplier development activity. The success of this activity is dependent on long-term strategic goals and proximity to the buyer (Routroy, Pradhan, 2013).

The success of supply chain partnership in construction industry is dependent on central coordination among partners employing decentralized task management, the application of appropriate information technology, mutual trust among partners (Lonngren et al., 2010).
Key success factors for SMEs

Small and medium size enterprises can be the leaders of their own supply chains. The success of small and medium size enterprise is analysed from two perspectives: the supply chain and the success of business development.

Supply chain management by SMEs has different attributes compared to supply chain management by large enterprises. According to J. Thakkar et al. (2008) SMEs focus on a market niche applying a short term perspective, and are suffering from weak coordination even within their own supply chain protecting their supply

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Large enterprises</th>
<th>SMEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive priorities</td>
<td>Market dominance through sustaining large market share</td>
<td>Market niches through sustaining profitable market position</td>
</tr>
<tr>
<td>Supply chain view</td>
<td>A strategy to compete through reduction of system wide cost</td>
<td>Owner led myopic and short term view to earn the profit</td>
</tr>
<tr>
<td>Inventory management</td>
<td>Aims at reducing system wide inventory cost to improve overall supply chain competitiveness</td>
<td>Use of safety stock unavoidable in absence of coordinated purchasing function and supplier relationships</td>
</tr>
<tr>
<td>Key sourcing activities</td>
<td>Supplier scoring and assessment, supplier selection and contract negotiation, design collaboration, procurement, sourcing planning and analysis</td>
<td>Evaluates suppliers mainly on cost and quality criteria. Long term view of collaborative design and responsiveness to fluctuating demands is missing</td>
</tr>
<tr>
<td>Time frame and relationships</td>
<td>With and intention to reap the rewards of consistent quality, timely deliver, cost advantage, early design modifications, etc.</td>
<td>Becomes potential acquisition targets of larger enterprises when the supply chain works well</td>
</tr>
<tr>
<td>Supply chain flows</td>
<td>Synchronized material, information, money and ownership flows</td>
<td>Finds difficulty in managing material flow in case of disturbed money and information flows</td>
</tr>
<tr>
<td>Product offerings</td>
<td>Standardized to achieve economies of scale</td>
<td>Customized to cater the changing needs of buyers</td>
</tr>
<tr>
<td>External control structure</td>
<td>Decentralized, structured and highly specialized; multiple core competencies development</td>
<td>Centralized, semi-structures and moderately specialized; specific core competencies development</td>
</tr>
<tr>
<td>Internal control structure</td>
<td>Command and control towards their small suppliers and distributors; collaborate with more dominant suppliers and distributors</td>
<td>Either accept command and control by original equipment manufacturers or 1st tier suppliers or utilise their negotiation strengths; pursue collaboration with other SMEs</td>
</tr>
<tr>
<td>Coordination mechanisms</td>
<td>Well developed at inter and intra organizational level</td>
<td>Suffers even from internal coordination problems</td>
</tr>
<tr>
<td>Transaction processes</td>
<td>Systematic and computer based</td>
<td><em>Ad hoc</em> and paper based</td>
</tr>
<tr>
<td>Use of information technologies and information</td>
<td>Part of business strategy</td>
<td>Still a buzz word</td>
</tr>
</tbody>
</table>

*Table 1*

Source: selected according to J. Thakkar et al. (2008).
Making the assumption that the supply chain management by large enterprises is the case of global supply chains, the important difference in attributes between supply chain management by large enterprises and SMEs can be identified. These attributes reveal that different competencies and capacities are developed in large enterprises and SMEs.

Presently the SMEs supply chain performance measurement is oriented towards internal business and profit maximization, lacks of measures related to market responsiveness, flexibility and delivery schedules, and complete order delivery (Thakkar et al., 2009). SMEs are lacking financial and technological capabilities and have weak bargaining power in the value chain. SMEs who are working with a larger product portfolio and buyers put more emphasis on innovation and learning, i.e. on product and process innovation, vendor development and information sharing among the supply chain players.

The strategy adopted by SMEs within the supply chain can be that of the innovator and that of the follower. The comparative study between SMEs in Pakistan and Canada implemented by A. A. A. Tipu and K. A. Fantazy (2014) revealed that SMEs in Canada are applying innovative and consumer oriented strategy in order to enhance their performance while SMEs in Pakistan adopt a follower’s strategy in order to achieve financial and non-financial performance. These differences can be partly explained by the level of economic development in countries being compared. The link between the supply chain management and operational performance of SMEs in an emerging country (Turkey) context was confirmed by S. C. L. Koh et al. (2007) research. Strategic collaboration and lean practices as well as outsourcing and multi suppliers have direct positive and significant impact on operational performance of SMEs.

In order to support the success of supply relationships SMEs should establish collaborative partnership with their key suppliers focussing on the development of efficient communication systems, trust and strategic partnership with suppliers (Bordonaba-Juste, Cambra-Fierro, 2009). The proactive, leader type behaviour would be expected to be applied by SMEs in certain cases when knowledge or technology transfer to suppliers is needed. However, SMEs themselves need to focus greater attention to information flow and mutual understanding among supply chain members (Singh, 2011) and cannot achieve good results because of the lack of resources.

There are two sets of key success factors for SMEs in the business-to-business relationships: internal and external ones (Chong et al., 2011). The internal success factors are successful customer relationships, information systems and information technology infrastructure and performance, supply chain facilities, information visibility, top management support and commitment, security and trust. Global competition, government encouragement and commitment as well and cultural considerations are external success factors. Successful customer relationships are based on cooperative relationship between the customer and SMEs. In today’s market customers having great bargaining power are taking the leading role in the custom relationships (Moreira, 2009). Even if the knowledge-sharing relationship with customers is initiated
by SMEs in order to increase customer satisfaction without strong interaction-oriented capabilities of customers the success of that knowledge sharing is limited or even negative. A. Macpherson and A. Wilson (2003) stated that the focus of supply chain organizations on the supply chain have significant effects on SMEs. These effects are expressed through increased expectation from customers and increased requirements to be met by suppliers. These elements can support the further development of SMEs; however, in the case of limited benefits of cooperation the supply chain partnership can remain more about the power and compliance then collaboration and trust.

The study conducted by M. Quayle (2003) revealed that trust, strategy, waste reduction and team working are the most important for the success of the supply chain of SMEs. New technology and inventory reduction, customer management and time to market were of the medium importance while supplier development, e-commerce, employees’ development, benchmarking and investor in people, innovation.

SMEs usually differ from large enterprises by the lack of resources, knowledge and money, reliance on a small number of customers and the need for multi-skilled employees. The diversity of SMEs is based on the backgrounds, motives and goals of entrepreneurs (Forsman, 2008). The competencies and knowledge of entrepreneurs form the basis of SMEs knowledge and competencies. Entrepreneurs usually have technical knowledge but lack managerial competencies and sophisticated managerial practices (Maes et al., 2004, cited in Forsman, 2008). SMEs have limited competencies in marketing, strategy and acquisition of new knowledge and technology. These enterprises are sensitive to external pressure (especially that of consumers) and risks. However, SMEs are more flexible, have organic structure and centralized decision making process, shorter communication lines (because of low formalization of communication) and are closer to customers.

### Linking supply chain challenges and key success factors for SMEs

The theoretical linkage of supply chain challenges and the key success factors for SMEs is drawn by comparing four sets of factors (in alphabetical order) related to supply chains and being analysed here above in the research: supply chain challenges, key success factors for supply chains and for SMEs, and SMEs performance (Table 2).

The current supply chain challenges that enterprises are facing are: blurring organizational boundaries, collaboration, flexibility, innovativeness, leadership, management of communication, and management of globalization, management of risk and sustainability, and supply chain integration. Many of the challenges reflect the key success factors of supply chains that are: agility, collaboration, cross-functionality, culture of partners, customer communication, flexibility, goals or partners, information sharing, innovativeness, long-term perspective, performance of partners, senior management commitment and involvement, skill and knowledge integration, supply chain integration, transformational leadership, trust, and visibility. SMEs seem to be locked in their own performance trap as they underperform in the areas that are their key success factors. These key
Success factors are: collaboration, customer relationship, information management, strategic partnership with suppliers, supply chain facilities, team working, top management support, and trust. However, SMEs underperform in many areas that are the keys to their success: they are ineffective in information sharing, lack competencies and knowledge in management, lack information technologies, lack leadership competencies, lack responsiveness, have low bargaining power, pay little importance to innovations, and are oriented towards short-term time horizon.

Both coherence and incoherence are identified comparing and analysing the main findings of the theoretical literature review. Collaboration is the challenge for the supply chain as well as the key success factor for supply chains and SMEs. The effective collaboration cannot be built without trust, which is an important key success factor for supply chains and SMEs, good management competencies and a long-term approach that SMEs lack. Information management and sharing is another important challenge for the current supply chain and is an important key success factor for supply chains and SMEs; however, studies reveal that SMEs are ineffective in information sharing. Flexibility could be the characteristics of the supply chain that could be supported by SMEs in local markets; however, SMEs are perceived as lacking responsiveness and innovativeness as drivers of flexibility. Supply chain integration is a key success factor for supply chains as well as their challenges. Leadership is an important factor for the success of the supply chain and still is the challenge that has not been solved yet. SMEs in that respect take the role of the follower of the supply chain leader and support the leader seeking for the supply chain success. Becoming a

Table 2

<table>
<thead>
<tr>
<th>Supply chain challenges</th>
<th>Key success factors for supply chains</th>
<th>Key success factors for SMEs</th>
<th>SMEs performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blurring organizational boundaries</td>
<td>Agility</td>
<td>Collaboration</td>
<td>Lack of competencies and knowledge (in management)</td>
</tr>
<tr>
<td>Collaboration</td>
<td>Collaboration</td>
<td>Customer relationship</td>
<td>Lack of information technologies</td>
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<tr>
<td>Flexibility</td>
<td>Cross-functionality</td>
<td>Information management</td>
<td>Lack of leadership competencies</td>
</tr>
<tr>
<td>Innovativeness within the supply chain</td>
<td>Culture of partners</td>
<td>Strategic partnership with suppliers</td>
<td>Lack of responsiveness</td>
</tr>
<tr>
<td>Leadership within the supply chain</td>
<td>Customer communication</td>
<td>Supply chain facilities</td>
<td>Low bargaining power (compared to customers’ bargaining power)</td>
</tr>
<tr>
<td>Managing communication within the supply chain</td>
<td>Flexibility</td>
<td>Team working</td>
<td>Low importance of innovations</td>
</tr>
<tr>
<td>Managing globalization</td>
<td>Goals of partners</td>
<td>Top management support</td>
<td>Short-term perspective</td>
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<tr>
<td>Managing risk</td>
<td>Information sharing</td>
<td>Trust</td>
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<tr>
<td>Managing sustainability</td>
<td>Innovativeness</td>
<td>Visibility</td>
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<tr>
<td>Supply chain integration</td>
<td>Long-term perspective</td>
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<td></td>
<td>Performance of partners</td>
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<td></td>
<td>Senior management commitment and involvement</td>
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<td>Skill and knowledge integration</td>
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Source: created by the author.
trustful, information sharing, collaborative, responsive and innovative partner in the supply chain under the leadership of a successful partner is the way for SMEs to develop their own success.

Conclusions

The research has started from the questions about the compatibility or linkage between the current supply chain challenges and success factors for SMEs, searching for evidences on how these two phenomena correlate, i.e. can the key success factors of SMEs be a full or partial solution to the current supply chain challenges? The findings of the research reveal that the answer to the research question is rather ambiguous. First, SMEs could be partners in global supply chains that provide flexibility and closeness to customers; however, they lack these competencies. Second, information sharing and management as well as collaboration based on trust are the key success factors for both, supply chain and SMEs, however, they are still important challenges for both too. Third, innovativeness is a challenge and a key success factor for the success of the supply chain; however, it cannot be supported by SMEs as a partner in a supply chain as they attach little importance to innovation. It seems that SMEs are still locked in their own performance limitations and coping with their own success can hardly support the success of the supply chain or, from other perspective, solving their own success problems SMEs can become a valuable and supportive partner in the pursuit of the success of the whole supply chain. In that case leadership in the supply chain, trust and collaboration among the supply chain partners could be the main success defining factors for SMEs in the supply chain.

The research findings are limited as they are theoretical and could be further supported by empirical research. The empirical analysis of SMEs success before and the development after their integration into the global supply chain could be one of the further interesting areas to be undertaken.

References


A Literature Review on the Linkage between Supply Chain Challenges and Key Success Factors for Small and Medium Size Enterprises


A LITERATURE REVIEW ON THE LINKAGE BETWEEN SUPPLY CHAIN CHALLENGES AND KEY SUCCESS FACTORS FOR SMALL AND MEDIUM SIZE ENTERPRISES


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Tyrimo rezultatai atskleidžia, kad net jei MVĮ galėtų būti globalių tiekimo grandinių galimybė būti arčiau vartotojų ir užtikrinti lankstumą, joms pačioms trūksta iššūkį. Dalįjimas informacija, jos valdymas ir bendradarbiavimas, kurie turėtų būti grindžiami pasitikėjimu, yra tiek tiekimo grandinės, tiek MVĮ kritiniai sėkmės veiksniai, o kartu ir iššūkiai. Inovatyvumas tiekimo grandinėje yra ir jos kritinis sėkmės veiksnys bei iššūkis, tačiau MVĮ nelabai gali padėti jį įspręsti, nes inovacijoms skiria mažai dėmesio.

Tyrimo rezultatai atskleidžia, kad mažų ir vidutinių įmonių veiklos rezultatyvumas, galintis tenkinti tiekimo grandinės kvalifikacijai, yra tiek tiekimo grandinės, tiek MVĮ kritiniai sėkmės veiksniai, o kartu ir iššūkiai. Inovatyvumas tiekimo grandinėje yra ir jos kritinis sėkmės veiksnys bei iššūkis, tačiau MVĮ galėtų būti mažai dėmesio.