MANAGEMENT TOOLS FOR SUPPORTING SUPPLY CHAIN MANAGEMENT – EVIDENCE FROM SLOVENIA

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Abstract. The main purpose of this paper is to examine usage and key drivers of management tools that support supply chain management practices. Results are reported for 155 Slovenian employees. Use of supply chain management practices in Slovenia is weaker than on average in well-developed parts of the world, especially Europe. In well-developed economies is supply chain management supported mainly with outsourcing, lean operations, and strategic alliances tools, while in Slovenia with loyalty management, core competencies, and six sigma tools. Education is a key driver that drives usage of tools supporting supply chain management in Slovenia, while also utilization of other tools has significant impact. Paper offers some practical implications.

Keywords: emerging economy, management tools, use of tools, key drivers, supply chain management, Slovenia.

JEL classification: M10.

1. Introduction

A plethora of management concepts have been developed over decades that can serve as a tool for achieving different organizational goals (Daft 2000; Van Assen *et al.* 2009; Rigby, Bilodeau 2011; Potocan *et al.* 2012). In business practice managers utilize management concepts and ideas with creation and implementation of different management tools (Daft 2000).

In nowadays globalized business, a shift occurred from begin focused solely on optimization of single business, to achieve optimization of a supply chain as a whole (Simchi-Levi *et al.* 2009; Christopher 2011; Chopra, Meindl 2013). Increased importance of supply chain management in last two decades is reflected also in steady rise of supply chain management literature, considering various aspects of supply chain management (Lambert, Cooper 2000; Jančiauskas, Treigiene 2003; Romano 2003; Gunasekaran, Ngai 2004; Chopra, Meindl 2013). Supply chain management is nowadays recognized as a key factor of business competitiveness (Meidute *et al.* 2012). Rising im-

portance of supply chains, also triggers the question about the role and importance of management tools in supporting supply chain management (Dabic *et al.* 2013).

In literature stream concerning management tools, the focus is on researching well-known and most used tools, like strategic planning, total quality management, customer relationship management, outsourcing, etc. (Rigby 2009, 2011). On the other hand, literature also speaks about management tools utilization in supply chains. For instance, recently most important tools in supply chain management were lean manufacturing, outsourcing and offshoring (Simchi-Levi *et al.* 2009), according to the practices in well-developed economies. Authors also research management tools utilization in supply chain in emerging or catching up economies. For instance, researchers deal with RFID utilization in supply chains (Meidute *et al.* 2012), and different management practices in transition markets supply chains (Dabic *et al.* 2013).

An important question in frame of management tools consideration is related to the question what drives usage of management tools in organi-

zations or supply chain (Potocan *et al.* 2012). Some evidences about drivers exists (Meidute *et al.* 2012; Potocan *et al.* 2012; Dabic *et al.* 2013), but this issue is under-represented in supply chain literature.

Existing literature offers insights about the role and importance of single selected management tools (or few together) in supply chain management, while the holistic perspective that reveals the impact of management tools on supply chain management practices, is blurry and still unclear. In that framework, there is no comprehensive discussion that will reveal how management tools are utilized in supply chain organizations, support or are related to supply chain management practices.

Problem. Use of supply chain management practices in Slovenia is weaker than on average in well-developed parts of the world, especially Europe. From the view point of using different management tools in organizations involved in supply chains, there is no evidence how are management tools related to the supply chain management practices, and what factors drives usage of most signficinat tools in supply chain management in emerging economies.

The study object – management tools and suply chain management practice usage in selected worldwide areas and emerging economy in Central Europe, Slovenia.

The aim – the aim of this paper is the identification of management tools that support supply chain management and revealing key factors that drive usage of these supporting tools in Central Europe catching up economy, Slovenia.

Research methods/desing/approach – the systematic, comparative, logical analysis of scientific literature regarading selected problem. Data for international comparision was obtained from Rigby's research on management tools (Rigby, 2011), while data for Slovenia are from the survey of management tools in Slovenia in late 2011. Elements of descriptive statistcs, correlation/regression analysis and multiple regression anaylsis was used to test hypotheses. Calculations are based on 155 responses.

Main objectives – in line with main purpose of this paper, the main objectives of the paper are: (1) presentation of management tools usage in selected worldwide areas and emerging economy; (2) report on supply chain management practices use in emerging economy; (3) identification of management tools that support supply chain management practices in emerging economy, (3) revealing key factors that drive single tools use; (4) identifying the strength of the impact of key drivers and supply chain supporting tools on utilization of supply chain management practices; and (5) to

provide some suggestion that can help managers to shape future utlization of management tools in supply chains, in Central Europe emerging economy.

Based on above outlined cognitions, this paper adds to the existing literature, by addressing following gaps. First, it empirically tests how management tools support supply chain management practices, thus going beyond partial discussions about tools utilized in process of supply chain management. Results about association of management tools with supply chain management practices are reported for Central Europe emerging economy – Slovenia. Second, the paper outlines a current state of management tools use and frequency of supply chain management practice utilization in Slovenia and selected worldwide areas. Third, this research also reveals key drivers of management tools which most significantly supporting supply chain management practices in Slovenia. In that frame we also tested the strength of the impact of key drivers and supporting tools on supply chain management practices.

According to the above outlined cognitios the paper consistns of following sections. In theoreticcal part are outlined issues about management tools in global context, the role of management tools in supply chains in emerging and well-developed economies, and key drivers that determine usage of management tools in supply chains. Also hypotheses are postulated in this section. Next some facts about sample and research approach are outlined, followed by the results and conclusions.

2. Management tools use in global context

Management authors define management tools as an entity of analytical instruments used to support the managers at work as something used in the implementation of the selected management concept (Dessler 2004, Sutherland, Canwell 2004). Another definition proposed by Rigby (2011), defines management tools as a set of concepts, processes, and exercises.

The development of management has gone through six phases – e.g. classical, humanistic, systems, contingency, post-modernistic and scientific values phase (Wren 1994; Mullins 2006; Certo, Certo 2009). In broader consideration of management ideas authors also define their:

1. concept – as a rather comprehensive, developed and defined basis for consideration of an idea;

2. methodology – as an entity or closely related collection of methods, rules and disciplinary postulates;

3. methods – as goal- and problem- ordered types of procedures, these are especially regular and systemic ways of setting and realizing the given goal;

4. techniques – as the manner in which technical details are treated; and

5. corresponding management tools – as the way for realization of management ideas (Sutherland, Canwell 2004; Sapkauskiene, Leitoniene 2010; Rigby 2011; Potocan *et al.* 2012). Fig. 1 outlines the relationship between management concepts and corresponding management tools (Potocan *et al.* 2012).
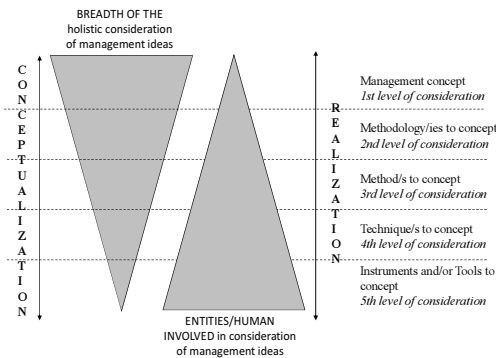

Fig. 1. The relationship between management concepts and corresponding management tools.

Looking at general trends about usage of management tools, it is evident that in Central Europe emerging economies are in the forefront management tools aimed to support business optimization, like re-designing of organization, optimization of business processes, implementing best practices, increasing quality level of all processes, eliminating unnecessary activities, etc. (Lang *et al.* 2000; Potočan, Mulej 2007; Potocan, Dabić 2012). The use of tools focused on concern for customer satisfaction and customers' needs was kept in the background or very seldom considered.

Meanwhile, well developed organizations have different priorities than those in emerging economies. Due to the high level of business optimization, there is only a little space for radical improvements, and they focus their attention on continuous improvements. Besides concern for achieving organizational goals, the concern for customer satisfaction and fulfilled their needs are the top priorities and foundation for use of customer related management tools. With already well optimized business, are in the forefront management tools that support increasing of customer satisfaction, better fulfillment of customer needs and enhancement customer relations (Rigby, Bilodeau 2009; Rigby, Bilodeau 2011; Jerman, Zavrsnik 2012). Cognitions about the relationship between

tools supporting business optimization and supporting customer relationship management, according to the developmental level of organizatinons (e.g. economy) are summarized in Fig. 2.
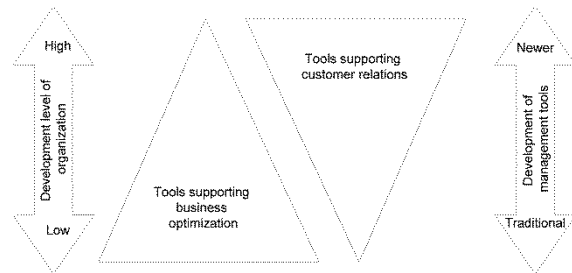

Fig. 2. Utilization of optimization and customer related management tools in organizations at different developments levels.

Based on above outlined cognitions and experiences from business practice, we can summarize that organizations need to use different tools for achievement of chosen business goals, at different levels of business development and different business environment.

3. Management tools utilization in supply chains and their role in supply chian management in well-developed and emerging economies

In nowadays business environment entities intensively collaborate in order to deliver value to their customers. A reflection of this trend is also a intensive integration of organizations into supply chains or supply networks (Lummus, Vokurka 1999; Lambert, Cooper 2000; Romano 2003; Simchi-Levi *et al.* 2009; Christopher 2011; Chopra, Meindl 2013). Being a part of supply chain require from organizations also taking into consideration other member of supply chain, when striving for achieving their optimized performance. Sometimes achieving optimization of single member processes requires, non-optimal processes of another member of supply chain, or vice versa.

Partners in supply chain use variety of management tools to support their internal processes and management of relations with customers and suppliers (Wang, Chan 2010; Myerson 2012; Dabic *et al.* 2013; Radosevic *et al.* 2013). In that framework, organizations (i.e. partners in supply chain) use different combinations of management tools, with which they support their management and operations (Rigby, Bilodeau 2009; Rigby, Bilodeau 2011). From the viewpoint of supply chain management practices we can differentiate between supply chain management practices (considered as single management tool) and other tools that are used by partners in supply chain.

In terms of using supply chain tool, different levels of development and integration of supply chains, reflect in different priorities (or levels) of supply chain tool use (Rigby, Bilodeau 2011; Dabic *et al.* 2013). For instance, organizations in well-developed areas as well as those from less-developed areas, are intensively integrated into supply chains, but those from developed part have often management of supply chains in their hands. On the other hand, despite being a member of a supply chain (e.g. supplier from emerging economy), organizations from Central Europe are struggling with optimization of internal business processes and customer relationship management.

Based on current focus of emerging economies from Central Europe on processes of internal organizational optimization and positions in supply chains, the following hypothesis is put forth:

H 1: Pattern of supply chain management tool use varies considerably between well-developed and emerging economies.

Besides utilizing supply chain management tool, an important role in supply chain management plays also utilization of other management tools, that are aimed to serve for different purposes, ranging from focus on internal processes (e.g. business process reengineering, mission and vision statements), to external processes (e.g. customer relationship management, supplier relationship management, radio frequency identification). This leads us to the question, related to the relationship between management tools and supply chain management tool in supply chain.

According to the assumptions from well-developed areas, is supply chain management supported with concepts as lean production, outsourcing and off-shoring (Simchi-Levi *et al.* 2009). For instance, lean production is further associated with just in time, since lean manufacturing requires right products, in right quantity, at right place. This requirement is heightened with outsourcing, when inputs are sourced from supply chain partners. Supply chain management is also importantly supported with customer and supplier relationship management (Chopra, Meindl 2013).

Nature of supply chains also requires a great amount of trust among partners. Trust and loyalty are "glue" that holds together various partners in supply chain (Laeequddin *et al.* 2009). According to the nature of supply chains and its management, it is evident that different management tools can support achieving of supply chain objectives and especially successful cooperation among all entities in supply chain. Thus, the theory and practical experiences suggest the following hypothesis:

H2: Management tools importantly support supply chain management.

4. Drivers determining use of management tools in supply chains

Being familiar with supply chain management tool and tools that significantly support supply chain management, is not enough for holistic understanding of management tools utilization in organizations and supply chains. An important consideration is related to the factors that influence usage of management tools (Potocan *et al.* 2012, Dabic *et al.* 2013). Knowing the impact of key drivers on tools supporting supply chain management and supply chain management tool, can enhance future utilization of management tools. Hence, the following hypothesis is put forth:

H 3: Key drivers of management tools use – education, working experiences, employee's position and organizational size, importantly influence on management tools use in supply chains.

Based on above outlined cognitions, is presupposed that management tools support supply chain management and that a set of factors importantly influence usage of management tools (i.e. those tools supporting supply chain management as well as supply chain management – as single tool). Thus, usage of supply chain management tool on one hand can depends upon key drivers that directly influence on its usage as well as on tools supporting supply chain management – as single tool. We thus, propose following hypothesis:

H 4: Usage of tools supporting supply chain management (as single tool), significantly mediate the effect of key drivers on supply chain management tool usage. The proposed mediating effect of tools supporting supply chain management on the relation between drivers of management tools and supply chain management (as single tool) are outlined in Fig. 3.
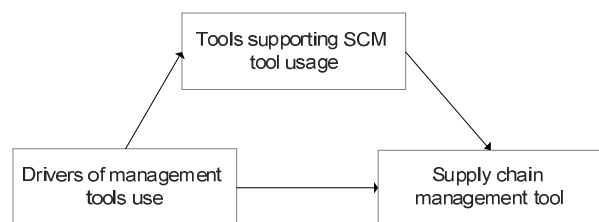

Fig. 3. The mediating role tools supporting supply chian management on the relation between drivers of management tools and supply chain management tool.

5. Methodology

5.1. Sample charchteristics

Empirical part of this paper is based on the survey of management tools in Slovenia. The aim of survey about management tools was to examine use of management tools among employees in Slovenian

organizations. Random sampling was done based on a GVIN directory that lists Slovenian organizations. A total of 750 questionnaires were sent via post to employees in selected organizations in 2011. A maximum five answers per organization were allowed. We received a total of 155 usable surveys for our analysis, resulting in 20.7% response rate.

The sample for this study included 48.4 percent males and 51.6 percent females. The average age of respondents was 44.35 years, and they had on average 20.49 years of working experiences. In terms of education level, 4.2 percent have finished secondary school, 56.9 percent have high-school or university degree, while 38.9 have master degree. Regarding current position of respondents, 59.3 percent are supervisory staff (of which 8.7 percent are lower, 32.0 percent middle, and 18.7 percent top managers) and 40.7 percent are professional workers. In terms of departments, 3.2 percent respondents worked in R&D department, 25.3 percent in basic (production or service) processes, 14.9 percent in accounting, 11.7 percent in marketing, 29.2 supervisory position in different department, and 15.6 in other departments (e.g., human resource, law). Regarding the organizational size, 13.5 percent were organizations having less than 10 employees, 18.7 percent have between 10 and 49 employees, 43.9 percent have between 50 and 249 employees, and 23.9 percent have more than 250 employees. In terms of economic sector, 1.9 percent organizations operated in industries in primary sector, 27.7 percent in secondary sector, 43.2 percent in tertiary sector, and 27.1 percent in quaternary sector.

5.2. Used questionnaire and measurements of variables in the survey

We developed a questionnaire to assess usage of management tools in organizations, which combines list of tools from Bain's worldwide survey (Rigby, Bilodeau, 2007; 2009; Rigby, 2011) and set of items aiming various aspect of management tools use in organizations. Developed questionnaire consist of three parts. First part – questions about using, knowing, satisfaction and desire to use and desire to become familiar with 40 management tools included in survey. Second part – general questions about management tools, like one's need to use management tools in the organization, influence of management tools on improvements/innovation in organizations, etc. Third part asked about demographical data about respondents and organizations.

For measuring use of single management tool, participants in survey rated each tool using a Likert-type scale ranging from "I know and use tool" (1) to "I don't know and don't use tool" (3). Demographic variables were also measured using scales, like education level ranging from "finished primary school" (1) to "Ph.D." (5), organizational position ranging from "professionals" (1) to "top managers" (5), organizational size ranging from "less than 10 employees" (1) to "more than 250 employees" (4), and economic sector ranging from "primary" (1) to "tertiary" (4). For respondent's age and working years they put the numbers, while for department they selected appropriate department.

Examination of management tools use worldwide is based on mean values of management tools use and calculated ranks. For examining relations between management tools and supply chain management tool Pearson product moment correlation coefficients were calculated. For the impact of key drivers on management tools, regression analysis was used. In last step, we examined the impact of key drivers on supply chain management tool, mediated with use of tools supporting supply chain management.

6. Results about management tools utilization in supply chains and their key drivers

First we outlined results about use of management tools worldwide, with focus on supply chain management tool. Table 1 shows ranks for management tools use worldwide.

Table 1. Top ten used management tools worldwide[a]. (Rigby, Bilodeau 2009, Rigby, Bilodeau 2011).

Management tool	Global average (2010)	North America	Europe (15)	Slovenia
1. Benchmarking	1	3	1	2
2. Strategic Planning	2	2	3	8
3. Mission and Vision Statements	3	4	5(t)	6 (t)
4. Customer Relationship Management	4	1	2	6 (t)
5. Outsourcing	5	6	5(t)	1
6. Balanced Scorecard	6	12(t)	8(t)	9
7. Core Competencies	7(t)	5	8(t)	3
8. Change management processes	7(t)	9	4	10
9. Strategic Alliances	9	7	7	17
10. Customer Segmentation	10	15(t)	12	11
Social media programs	19	8	17(t)	16
Total quality management	12	10	15	5
Supply chain management	11	15(t)	8(t)	15
Knowledge management	12	17	11	4

[a] Ranks for Slovenia are calculated upon mean values from own research. (t) stands for tight result.

Results indicate different priories in tools use among compared areas. Slovenia's pattern significantly differs especially from Global average and European Union average. Supply chain manage-

ment tool is not among most used tools in organizations around the globe, with exception of Europe. In comparison to global average and especially European Union, use of supply chain management tool in Slovenian organizations is significantly lower. These results provide partial support for hypothesis 1, which states that usage of supply chain management tool worldwide varies considerably.

Turning to the associations between management tools and supply chain management tool, it is evident that loyalty management, core competencies, scenario and contingency planning, six sigma and knowledge management are strongly or moderately positively associated with supply chain management tool use (see Table 2). This means that with higher usage of selected tools, the support of supply chain management is also better and/or is supply chain management tools more frequently utilized. The associations of remaining tools are also significant, but weaker. These results are not reported here. These findings provide support for Hypothesis 2, which states that management tools importantly support supply chain management.

Table 2. Correlations between supply chain management tool and tools top five tools supporting supply chain management in Slovenia.

	Correlation
Supply Chain Management	1
Loyalty Management	0.560**
Core Competencies	0.539**
Scenario and Contingency Planning	0.469**
Six Sigma	0.467**
Knowledge Management	0.466**

* p < 0.05; ** p < 0.001

Turning to the drivers of management tools use, it is evident that education significantly influence on supply chain management tool use, explaining 19.7 percent variance in this tool. The impact of other considered factors is insignificant. Hence, we conclude that the higher the employees' education level, the higher their use of supply chain management tool. In terms of impact of drivers of management tools use on use of tools that most strongly support supply chain management tool use, education plays major role, followed by organizational size and employee's position. The impact of working years is insignificant. Standard regression coefficients for selected four key drivers of management tools and the percentange of variance in management tool that they explain, are outlined in Table 3.

Table 3. The influence of key drivers on management tools use in Slovenia.

Management tool	Education	Working years	Employee's position	Organizational size	Variance explained
Supply chain management	–0.443**	ns	ns	ns	19.7 %
Loyality Management	–0.318**	ns	ns	ns	11.1 %
Core Competencies	–0.433**	ns	ns	–0.155*	24.2 %
Scenario and Contingency Planning	–0.-611**	ns	ns	0.157*	35.4 %
Six Sigma	–0.584**	ns	–0.262**	ns	48.7 %
Knowledge Management	–0.423**	ns	ns	–0.185*	24.6 %

* p < 0.05; ** p < 0.001

Hypothesis 3 states that key drivers of management tools use – education, working experiences, employee's position and organizational size, importantly influence on management tools use in supply chains. Based on presented results we can support hypothesis 3 for education, partly support for organizational size and employee's position, while rejecting for working years.

According to above findings, it is evident that supply chain management tools are affected with usage of other tools as well as with key drivers of management tools use. In this case we add use of tools supporting supply chain management as mediator of the relationship between key drivers and supply chain management tool use.

Results of hierarchical multiple regression analysis for supply chain management tool use, in first step confirms the significant impact of education as a key driver. In second step, when introduction top five tools supporting supply chain management (considered as mediating variables), results reveals that loyalty management and core competencies have significant influence on supply chain management tool use, while the impact of education is weaker, although significant. Also in terms of explained variance, is evident that both supportive tools plays important role in predicting supply chain management tool use, since they considerably contribute to the explaining variance in supply chain management tool usage. Results of hierarchical multiple regression analysis for supply chain management tool are outlined in Table 4.

Table 4. The impact of management tool key drivers and supporting tools usage on supply chan management tool use.

Variable	Step1		Step 2	
	β	t	β	t
Education	–0.443	–5.004**	–0.175	–2.247*
Working years	–0.101	–1.196	–0.138	–1.948
Position in organization	–0.021	–0.248	–0.020	–0.275
Organizational size	–0.046	–0.572	–0.029	–0.412
Loyality management			0.345	4.512**
Core Competetncies			0.291	3.572*
Scenario and contingency planning			0.167	1.892
Six sigma			0.176	1.937
Knowledge management			0.043	0.487
F	8.179**		29.045**	
R²	0.197		0.407	

**p < 0.001, * p < 0.05; β is standardized beta coefficient; sample size is 151, due to missing values.

According to above results, we support hypothesis 4, which state that usage of tools supporting supply chain management (as single tool), significantly mediate the effect of key drivers on supply chain management tool usage.

7. Discussion

An international comparison reveals that usage of supply chain management tool is on global average not among top used tools, while in (well-developed part of) Europe is among top 10 used, ranked eight. On the other hand, despite the fact that Slovenia is intensively involved in supply chains across the Europe, the usage of supply chain management practices is significantly lower in Slovenia's organizations. In forefront of use in Slovenia are tools for optimizing organizational processes.

A lower usage of supply chain management practices could be also contributed to the "status of suppliers in supply chain", since a lot of Slovenain organizations acts as suppliers in supply chains of organizations in well-developed economies. Conseqeuntyl, Slovenian organizations are being focused mainly on operational decisions and activities, in terms of supply chain management.

In Slovenia, considered as an emerging economy in Central Europe, is supply chain management importantly dependent upon use of loyalty management, core competencies and six sigma

management tools. On the other hand, evidences from different parts of world emphasize that, supply chain management is supported heavily with outsourcing, lean operations, and strategic alliances (Laeequddin *et al.* 2009; Simchi-Levi *et al.* 2009; Myerson 2012). Outsourcing is in Slovenia top used management tools, but its usage is only weak associated with supply chain management practices. Such pattern suggests, that main focus in examined organizations is to outsource non-core activities and searching for core competencies. Also in Lithuania, another emerging economy, outsourcing has been recognized as the method of cost reduction and asuuring effectiveness of organizations (Mickaitis *et al.* 2009)

Anohter important tool – lean production, which importantly support supply chain management (Myerson 2012) is among least used tools in Slovenia.

According to the results, loyalty management plays an important role in supply chain management in Slovenian organizations and conseqently as supply chain members. In terms of seeking reasons for such state we can outline few of them. First, in terms of economic development, experiences teach us that trust and level of economic development are often positively associated (more trust is among partners in well-developed economies) (Cha, Edmondson 2006, Laeequddin *et al.* 2009, Bagdoniene, Hopeniene 2013). Second, current economic conditions in country's economy additionally lowering level of trust, coupled with traditional "culture" of mistrust among Slovenian, which broke out (again) in last couple of years (Piciga *et al.* 1992; Musek 1993; Dyck, Mulej 1998; Potocan *et al.* 2008; Nedelko, Potocan 2013). Third, high importance of loyality management in supply chain management, can reflects the nature of supply chains, which require tight cooperation and trust among all partners (Simchi-Levi *et al.* 2009; Christopher 2011).

Such emphasis on loyalty and trust can be an indicator of a lot of mistrusts presence in Central Europe emerging economies supply chains. While on the other hand, interesting is that in more developed parts of Europe, the emphaisis on trust and loyalty among supply chain members is not emphasized so much.

In terms of management tools drivers, education has dominant impact on use of management tools, followed by the impact of employees' position and organizational size.

Considered drivers of management tools use, key drivers explain considerable high percentage of variance in top tools supporting supply chain management (i.e., core competencies, scenario and contingency planning, six sigma and knowledge

management). Whle, the drivers have the weakest influence on loyalty management – a top tool supporting supply chain, explaining considerable lower amount of variance in loylaity management tool use. This reveal, that a lot of other factors influence on loyalty management, and is not so much dependent upon education.

Based on above discussion it is evident that usage of supply chain management practices is on one hand dependent upon other management tools use (e.g. tools supporting supply chain management) and dirvers of management tools use, which influence on supply chain management (considered as a single tool). A further analysis of the influence of key tool drivers and supporting tools for supply chain management practice utilization reveals, that loyalty management and core competencies have stronger influence on supply chain management tool use, than education.

Based on linking drivers of tools use and tools supportign supply chain management we can make following conclusions. With strong emphasis on managing loyality in supply chain in emerging economies, organizations send a strong signal that they try to reduce the impact of trust and loyality issues. But, on the other hand, in terms of drivers, usage of loyalty management is not explained very well with key drivers of management tools use. This suggests that loyalty management is difficult to influence. This issue is even heightened in Central Europe, where a lot of mistrust is present (Potocan *et al.* 2008; Potocan *et al.* 2013).

8. Conclusions

This paper examined usage and key drivers of management tools that support supply chain management practices in emerging economy in Central and East Europe – namely Slovenia.

International comparision reveals that supply chain management management practices are in Slovenia less used than in compared areas, especially in well-developed parts of Europe. In terms of drivers, which influence on usage of management tools that support supply chain management practices, education has dominant role. When considerding also other tools, which organizations use, the impact of education is still significant, but the dominant impact on supply chain management tools use, stems from other tools, used in the organization.

In terms of practical implications, findings about actual state of supply chain management tool and the impact of tools supporting supply chain management, accompanied with key drivers, present an important starting point for reviewing current use of management tools in organizations.

For instance patterns of use in well-developed part of Europe, present an important guide in directing future utilization of management tools, in order to better support supply chain management and operations in emerging economies. For instance, identifying education as key drivers can enhance in-service employees training, aiming to make employees familiar with different management tools.

In terms of limitations, this is an initial approach to examine the role of management tools in supply chain, with focus on supply chain management practices, which needs to be further theoretically and empirically developed. We also report about the impact of few selected key drivers and outline results for top five tools that most significantly support supply chain management. Furtermore, a future development of theory regarding influence of key drivers on management tools use must be provided.

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