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Influence of Organizational Factors on Management Tools Usage in Slovenian Organizations

Vojko Potocan, Zlatko Nedelko, Matjaz Mulej

Faculty of Economics and Business, University of Maribor
Razlagova 14, 2000 Maribor, Slovenia
E-mail: vojko.potocan@uni-mb.si, zlatko.nedelko@uni-mb.si, mulej@uni-mb.si

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Purpose – In the global competitive environment, managers of organizations must permanently rethink and renew their work, especially about the use of different managerial tools. A selection of suitable management tools for organization requires consideration of characteristics of the known tools, comparison of different tools, and consideration of demands and conditions of the organizations. But direct comparison of different management tools is not possible because of their content-related and methodological differences. In management theory, various authors tried to consider the use of management tools more deeply. The main purpose of this paper is to examine the influence of important organizational factors on usage of single management tools in Slovenian organizations. Thus, we consider: 1) usage patterns of management tools in different areas worldwide, 2) the influence of single organizational factors – i.e. education, position, and working years, on the usage of management tools in Slovenian organizations, and 3) the influence of a linear combination of selected factors on usage of management tools in Slovenian organizations.
Design/methodology/approach – A qualitative analysis is applied on the basis of the selected cognitions from Management, and Organization. The quantitative analysis includes desk research about the management tools, and analysis of the results from a survey about management tools in Slovenian organizations in 2010. In examining the impact of the considered organizational factors (separately and in combination) on management tools we use linear regression analysis to predict the influence of single factors and linear combination of the selected factors on the use of selected management tools. AMOS 17.0 was used for analysis.
Findings – Intensity of management tools usage in Slovenian organizations is similar to the global patterns, while patterns of their usage are rather different. Examination of factors influencing usage of the top five management tools in Slovenian organizations reveal: education has the strongest impact on the usage of management tools, the impact of employees' position in organization is weaker, and the impact of working years is very weak. When we take into consideration all three predictors simultaneously, the impact of education and position becomes weaker, while the impact of working years becomes insignificant. We apply a deeper approach to gauge the influence of organizational factors on usage of the selected management tools. The impact of other considered factors, we find, is not significant.
Research limitations/implications – Research is limited to a hypothesis, broader qualitative aspects encountered during desk research, and some quantitative analysis of results from our survey. We test our hypotheses and the chosen model on the top five management tools most used by employees in Slovenian organizations.
Practical implications – Authors try to overcome the prevailing practice of very general consideration of management tools usage, especially regarding organizational factors, which influence the usage of management tools. Authors suggest a new approach, hardly known in the main-stream literature. They propose a more specific and target-oriented approach to consideration of management tools usage in business.
Originality/value – Available management literature does not provide a similar solution for considering and researching the usage of management tools in business. This is useful for business practice in organizations, for advancing the usage of management tools, since the most important organizational factors on management tools usage are outlined.

Keywords: *management, management tools, tools usage, influence on tools usage, organizational factors.*

Introduction

Organizations in the current environment assure their existence and development with continuous innovating of their management by using suitable managerial concepts (Pascale, 1990; Lock, 1992; Cooper, Argyris, 1998; Cole, 2004; Armstrong, 2006; Linstead et al., 2009; Morgan, Wang, 2010).

The content-related development of management has gone through six distinct phases, i.e. Classical, Humanistic, Systems, Contingency, Post-modernistic, and the Scientific Values phases (Cooper, Argyris, 1998; Certo, Certo, 2009; Schermerhorn, 2009; Mullins, 2010; Oswick et al., 2011). In each phase, the authors developed numerous ideas and associated management concepts (Lock, 1992; Cooper, Argyris, 1998; Cole, 2004; Strandskov, 2006; Certo, Certo, 2009; Ginevicius, 2010; Mullins, 2010).

For usage of single management ideas authors also developed and presented the following useful definitions and descriptions: 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) necessary tools (in management literature some authors use the term instruments instead) (Lock, 1992; Cooper, Argyris, 1998; Strandskov, 2006; Collins, Porras, 2008; Daft, 2009; Linstead et al., 2009; Ginevicius, 2010; Schroth, 2011).

A relatively holistic comparison of fairly many management tools is very complex and pretentious; from the contextual viewpoint sometimes it is impossible.

Our research consists of two steps. First, we outlined a pattern of management tools used worldwide. In order to ensure a more comprehensive understanding of the state of management tools usage in Slovenia we compare this to a framework of the global situation. Second, in a framework of the top ten management tools used, we focus detailed research on the top five most used management tools in Slovenian organizations. With that approach we try to improve the perception about the usage of management tools.

Therefore the main purpose of this paper is to examine the influence of selected important organizational factors on the usage of particular single management tools in Slovenian organizations.

Theoretical background

Literature review

Holistic consideration of management tools – as a possible (and selected) level of contemplation of management concepts is presented in Figure 1.

The presented model heralds new dilemmas about needs for, making sense of, and determining the users' benefits from, various management tools, and especially about the possibility of their comparison (Pascale, 1990; Lock, 1992; Ittner, Larcker, 1997; Potocan et al., 2005; Melnikas, 2008; Daft, 2009; Buchanan, Huczynski, 2010; Soparnot, 2011).

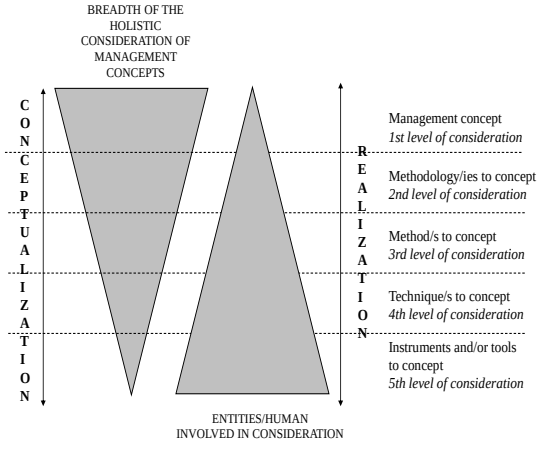

Figure 1. Breadth of the holistic consideration of management tools (New concept by authors)

A holistic comparison of several different management tools (e.g. their characteristics, preferences, weaknesses, usage, possible results, etc.) is very complex and difficult (Etzioni, 1997; Schermerhorn, 2009; Buchanan, Huczynski, 2010; Mullins, 2010). In the literature authors mention some dilemmas about comparison, e.g. (Pascale, 1990; Lock, 1992; Chatman, Jehn, 1994; Cooper, Argyris, 1998; Cole, 2004; Kleindorfer et al., 2005; Armstrong, 2006; Laamanen, Wallin, 2009; Linstead et al., 2009; Leiponen, Helfat, 2010) — these authors list the following as dilemmas: different comprehension and contextual understanding of the tools, the simultaneous usage of several tools, various size and use of the tools on different levels or fields of organizations, etc. All management tools cannot be compared – e.g., comparison of the tools, which were formed for various purposes, have different aims or exclude each other contextually.

Therefore, most management authors focus their discussion on:

- Relatively holistic direct comparison of single management concepts (Pascale, 1990; Etzioni, 1997; Zavrsnik, 2007; Schermerhorn, 2009; Greenwood, Miller, 2010; Sapkauskiene, Leitoniene, 2010; Schreiner et al., 2010; Valackiene, 2011);
- Relatively holistic direct or indirect comparison of two (or less) contextually similar tools (Lock, 1992; Cooper, Argyris, 1998; Armstrong, 2006; Melnikas, 2008; Potocan, Mulej, 2009; Morgan, Wang, 2010; Mullins, 2010; Schroth, 2011);
- Partial (and less holistic) indirect discussion of the chosen viewpoint of a greater number of management tools (e.g., Armstrong, 2006; Rigby, Bilodeau, 2007; Daft, 2009; Rigby, Bilodeau, 2009; Buchanan, Huczynski, 2010; Mullins, 2010; Rigby, 2011).

We research usage of 25 chosen management tools (see Lock, 1992; Cooper, Argyris, 1998; Cole, 2004; Armstrong, 2006; Rigby, Bilodeau, 2007; Mullins, 2011; Potocan, Nedelko, 2010). Many possible management tools and/or groups of suitable tools are discussed in the current literature (Etzioni, 1997; Melnikas, 2008; Schermerhorn, 2009; Certo, Certo, 2009; Buchanan, Huczynski, 2010; Greenwood, Miller, 2010; Morgan, Wang, 2010). But, we still do not know how to make holistic direct comparison among most or all known management tools (Cooper, Argyris, 1998; Rigby, 2001; Potocan et al., 2005; Collins, Porras, 2008; Linstead et al., 2009; Morgan, Wang, 2010; Mullins, 2010).

Over the past 20 years, in the framework of contingency and post-modernistic theories, authors developed different solutions for research of the management tools on the basis of their usage (Cole, 2004; Armstrong, 2006; Rigby, Bilodeau, 2007; Linstead et al., 2009; Daft, 2009; Potocan, Nedelko, 2010). Consideration of management tools usage is an indirect approach to exploring them more holistically (Potocan et al., 2005; Potocan, Mulej, 2009; Potocan, Nedelko, 2010).

In management literature the research by the Bain Research Group of the usage of tools is well known (Rigby, 2001; Rigby, Bilodeau, 2007, 2009; Rigby, 2011). They cover many countries (in 2003 the number was 60 countries), over a long period of time (it has been going on since 1993), and included a large number of management tools – the inquiry discusses 25 chosen management tools.

For our work, we developed our own field-research method using a questionnaire (about its details see Potocan, Nedelko, 2010). Survey questions included

information about usage of, and satisfaction with, 40 management tools. The purpose of our survey was to initiate an analytical discussion of their use. We use results from our questionnaire for consideration of the: 1) basic characteristics of the chosen management tools; 2) reasons for the use of the chosen tools in business; and 3) design of the synthetic research data in a form comparable with publicly accessible data about the usage of management tools in Slovenian organizations in 2010.

Provided hypotheses

Based on cognitions from the relevant literature (e.g. Lock, 1992; Cole, 2004; Armstrong, 2006; Daft, 2009; Franken et al., 2009; Mullins, 2010), and from our previous contributions (Potocan et al., 2005; Potocan, Mulej, 2009; Potocan, Nedelko, 2010) we postulated research question and four hypotheses.

Research question states that significant differences exist in usage of the same particular management tool by employees in organizations worldwide.

Hypotheses - Hypotheses 1, 2, and 3 are related to examining the impact of selected organizational factors, namely education, position, and working years on single management tool usage. Hypotheses 1, 2, and 3 read:

H1 – Education level of employees in Slovenian organizations has a statistically significant influence on single management tool usage.

H2 – Position of employees in Slovenian organizations has a statistically significant influence on single management tool usage.

H3 – Working years of employees in Slovenian organizations have statistically significant influence on single management tool usage.

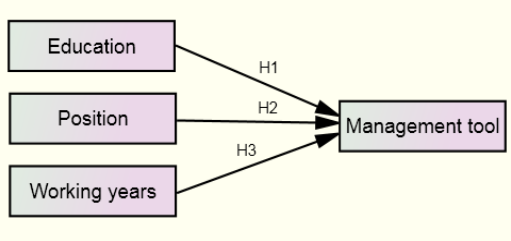

Figure 2. A regression model for Hypotheses 1, 2, and 3

H 4 – Usage of single management tool is predicted as a linear combination of education, position, and working years.

We presume that the management tools usage can be approximated by a linear combination of education, position, and working years. The prediction cannot be perfect; thus, the model includes an error variable (Er1). For our research study, we developed a path diagram to predict the single management tool usage. A regression model is presented in Figure 3.

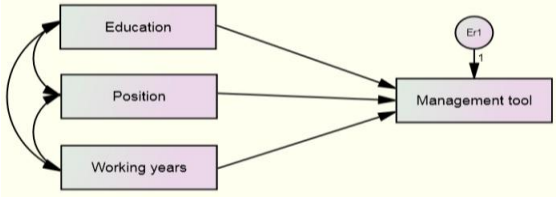

Figure 3. A regression model for Hypotheses 4

Research design

Research model – literature review outlined a plethora of factors that could influence usage of management tools in organizations. In the interest of space and designing most reliable, exact and parsimonious model we test the impact of seven organizational factors (education, employees' position, working years, type of education, organizational size, department of working, and industry served by the organization). Preliminary test reveals that among seven considered factors, education, position, and working years have considerable impact on management tools usage. Inclusion of the other four factors does not contribute much towards explaining usage of management tools. Thus, in our further analysis we incorporated only factors concerning education, position, and working years.

Methods and instrument – for the purpose of our research we adopt frequently studied management tools, and we aim at later comparison (Rigby, Bilodeau, 2007; 2009; Rigby, 2011). Focus of the survey was on knowledge about and use of management tools. If was there a desire to use them? Why do users who are familiar with these tools not use them, and why is there no desire to get to know any single management tool?

Our questionnaire for surveying management tools usage by Slovenian employees consists of three parts:

Part 1 – about using, knowing, satisfaction and desire to use and desire to become familiar with 40 management tools included in survey;

Part 2 – some 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; and

Part 3 – demographical data about respondents and organizations.

To enable measuring single management tool usage, respondents rate each tool, using a 5 point Likert-type scale, ranging from "I know and use tool" (1) to "I don't know and don't use tool" (5). To measure their education level respondents have options from "undergraduate" to "Ph.D", for position from "personnel" to "CEO", and for working years from "less than 5 years" to "more than 10 years". We have no room to discuss questionnaire details here.

We analyzed data with several methods. We used the Kolmogorov Smirnov test for normality; we can tentatively conclude that most variables in our research do not markedly violate a normal distribution. Therefore we used adequate parametric statistics test (for more about researches in this field see Ho, 2006; Leech et al., 2008). We tested the impact of each selected factor on the management tools usage by SPSS regression analysis. Further testing in AMOS was applied, where we postulated that usage of the single management tool is predicted as linear combination of the selected three observed independent variables.

Due to limited space we report only on five management tools most frequently used by employees in Slovenian organizations. Therefore only the most likely estimates are outlined, like (1) standardized regression weights; (2) correlations; and (3) squared multiple correlations.

Data Used – The survey was done in 2010 covering employees in Slovenian organizations. Altogether we sent 750 questionnaires to organizations. Target population included managers, regardless of their hierarchical position. We received 210 answers and were able to use 155 in our study. Respondent rate was 28.0%, while the rate for questionnaires used was 20.7%. Sample included organizations from all over the country (i.e., we obtained relatively representative regional coverage; sample met the basic-activity structure of organizations in the country, with a good fit to the industry-based structure of the national economy). International data are obtained from BAIN's worldwide study of management tools (Rigby, Bilodeau, 2007; 2009; Rigby, 2011).

Briefly outlining demographics of our sample we can postulate following. Average age of respondents in our survey is 44.35 years, having on average 20.49 years of working experience, of which 9.03 years was spent in the current organization. In the sample we have 48.4 % males and 51.6 % females. Concerning education, 56.9 % of respondents have a bachelor degree, 38.9 % master or doctorate degree, while only 4.2 % just have secondary school. Regarding the type of education, 68.3 % of respondents have social type of education, 20.7 % natural and technical, 8.3 % other, and 2.8 % humanitarian. Regarding their current position in organization, 59.3 % of respondents are supervisory staff (of which 8.7 % were in lower management, middle management 32.0 %, and top management 18.7 %), while 40.7 % of employees are non-supervisory staff (i.e., specialists). Concerning organizational size, 43.9 % of respondents work in medium sized organizations (50 – 249 employees), 23.9 % in large (> 250 employees), 18.7 % in small (10 – 49 employees), and 13.5 % work in organizations with less than 10 employees. Regarding the department in which employees in survey work, it is evident that 25.3 % work in primary productive processes, 14.9 % in accounting, 11.7 % in marketing, 3.2 % in R&D, and 15.6 % in other departments; 29.2 % of respondents are involved in managerial processes in organizations. The economic sectors in which the respondents worked were: in primary economy sector (1.9 %), secondary (27.7 %), tertiary (43.2 %), and quaternary (27.1 %).

Response rate results deviated from the representative sample (e.g., organizational size, position in organization). Managers provided most of the responses. This result matches the rest of our study, since managers crucially impact the management tools usage. Regarding the organizational size, we presupposed that management tools in Slovenia were used in both smaller and larger organizations. Despite some deviations, we conclude that the obtained data are adequate for analyzing management tool usage in organizations from the selected content and methodological bases.

Results and Findings

International comparison of management tools usage

The main purpose of international comparison is to examine patterns of single management tools usage in selected regions worldwide and in Slovenia. Only aggregate data about usage of single management tools in different regions are used. We compared top ten most commonly used management tools in Slovenian organizations with the top ten most commonly used tools in selected areas from the worldwide survey (Rigby, Bilodeau, 2007) (See Table 1).

Table 1 presents data about usage of particular single management tools in Global average (GL), North America (NA), Europe (EU), and Slovenia (SI). We compared averages of worldwide usage during 2006 GL, NA, and EU data and 2010 for Slovenia. Data for selected international regions were calculated based upon results from the Bain study of management tools (see Rigby, Bilodeau, 2007). Data for Slovenian organizations are obtained from our research.

Table 1

Top ten most commonly used management tools worldwide

Management tool	GL	NA	EU	SI
1) Strategic Planning	1	1	1	8
2) Customer Relationship Management	2	3	4	7
3) Customer Segmentation	3	6	2 (t)	11
4) Benchmarking	4	2	2 (t)	2
5) Core Competencies	5 (t)	5	5 (t)	3
6) Mission and Vision Statements	5 (t)	4	7	6
7) Outsourcing	7	8	5 (t)	1
8) Business Process Reengineering	8 (t)	10 (t)	10 (t)	10
9) Knowledge Management	8 (t)	12	10 (t)	4
10) Scenario and Contingency Planning	8 (t)	9	8	12
Total quality management	*15*	*18 (t)*	*14(t)*	*5*
Balanced scorecard	*12*	*13 (t)*	*13*	*9*

The impact of organizational factors on management tools usage in Slovenian organizations

The impact of education, position, and working years on usage of one particular management tool at a time

To test hypotheses and the model about prediction of single management tool usage, we used the five management tools most commonly used by employees in Slovenian organizations. These tools are: (1) outsourcing, (2) benchmarking, (3) core competencies, (4) knowledge management, and (5) total quality management. First we outline results about proposed hypothesis 1, 2, and 3. In that framework we next outline results of correlations and regression analysis.

Outsourcing: *education* ($r = -0.450$, $p<0.001$) and *position* ($r = -0.248$, $p<0.05$) significantly influence usage of outsourcing in Slovenian organizations. Regression analysis reveals that the higher the education of employees, the higher is their usage of outsourcing ($\beta = -0.450$, $t = -6.013$, $p<0.001$). Regarding position we can conclude, that the higher the employees' position in organization, the higher is their application of outsourcing ($\beta = -0.248$, $t = -3.120$, $p<0.05$). The impact of working years on usage of outsourcing is insignificant ($r=0,141$, $p>0.05$).

Benchmarking: *education* ($r = -0.533$, $p<0.001$), *position* ($r = -0.252$, $p<0.05$), and *working years* ($r = 0.198$, $p<0.05$), all of them significantly influence employees' usage of benchmarking in organizations. Regression analysis reveals that the higher the education of employees, the higher is their usage of this tool ($\beta = -0.533$, $t = -7.513$, $p<0.001$). Regarding impact of position it is evident that

the higher the employees' position in organization, the higher is their usage of benchmarking (β = -0.252, t = -3.163, p<0.05). On the other hand for impact of working years it is evident that as employees are becoming more experienced, their usage of benchmarking declines (β=0.198, t=2.494, p<0.05).

Core competencies: *education* (r = -0.478, p<0.001) and *working years* (r=0.161, p<0.05) significantly influence usage of core competencies by employees in Slovenian organizations. Regression analysis reveals that the higher the employees' education, the higher is the usage of core competencies (β = -0.478, t = -6.487, p<0.001). On the other hand it is evident that more experienced employees use their core competencies less (β = 0.161, t = 2.005, p<0.05). The impact of position on usage of core competencies is insignificant (r = -0.098, p>0.05).

Knowledge management: *education* (r = -0.470, p<0.001) and *working years* (r = 0.202, p<0.05) significantly influence employees' usage of knowledge management in Slovenian organizations. Regression analysis reveals that the higher the employees' education, the higher is usage of knowledge management (β = -0.470, t = -6.270, p<0.001). Regarding working years it is evident that more experienced employees use this tool less (β = 0.202, t = 2.513, p<0.05). The impact of position on usage of knowledge management is insignificant (r = -0.076, p>0.05).

Total quality management: *education* (r = -0.563, p<0.001) and *position* (r = -0.342, p<0.001) significantly influence usage of total quality management in Slovenian organizations. Regression analysis reveals that the higher employee's education is, the higher is their usage of total quality management tool (β = -0.563, t = -8.118, p<0.001). Regarding impact of position it is evident that the higher employee's position in organizations, the higher is their usage of total quality management (β = -0.342, t = -4.429, p<0.001). The impact of working years on usage of total quality management is insignificant (r = 0.121, p>0.05).

The impact of linear combination of education, position, and working years on usage of single management tool

We continue with results about the proposed hypothesis 4. In that framework we will outline results about correlations and regression analysis.

Outsourcing: *education* and *position* are highly significant predictors of outsourcing usage by employees in Slovenian organizations (C.R. = -5.227, *p<0.001*; C.R. = -2.107, *p < 0.05*, respectively). Education is significantly and negatively correlated with the usage of outsourcing (β = -0.402); position is significantly and negatively correlated with usage of outsourcing (β = -0.160). The effect of working years on usage is insignificant (C.R. = 1.110, p>0.05). Hence, we conclude that the higher employees' education and the higher employees' position in organization, the higher is employees' usage of outsourcing. Therefore, a higher level of education and higher hierarchical position in organization are associated with a higher usage of outsourcing in Slovenia. The three predictor variables explain 24% of the variance in the employees' usage of outsourcing.

Benchmarking: *education* and *position* are highly significant predictors of benchmarking use by employees in Slovenian organizations (C.R. = -6.664, *p<0.001*; C.R. = -1.967, *p < 0.05*, respectively). Education is significantly and negatively correlated with the usage of benchmarking (β = -0.483) and position is significantly and negatively correlated with use of this tool (β = -0.141). The effect of working years on its usage is insignificant (C.R. = 1.769, p>0.05). Hence, we conclude that the higher employee's education and the higher employee's position in organization, the higher is employee's usage of benchmarking. Therefore, a higher level of education and higher hierarchical position in organization are associated with higher usage of benchmarking in Slovenia. The three predictor variables explain 32% of the variance in the employees' usage of benchmarking.

Core competencies: *education* is a highly significant predictor of core competencies usage by employees in Slovenian organizations (C.R. = -6.356, *p<0.001*). Education is significantly and negatively correlated with the usage of core competencies (β = -0.488). The effect of position (C.R. = 0.297, p>0.05) and working years (C.R. = 0.835, p>0.05) on its usage is insignificant. Hence, we conclude that the higher employees' education, the higher is employees' usage of core competencies. Therefore, a higher level of education is associated with higher usage of this tool in Slovenia. The three predictor variables explain 25% of the variance in the employee's usage of core competencies.

Knowledge management: *education* is a highly significant predictor of knowledge management use by employees in Slovenian organizations (C.R. = -5.969, *p<0.001*). Education is significantly and negatively correlated with the usage of knowledge management (β = -0.465). The effect of position (C.R. = 0.383, p>0.05) and working years (C.R. = 1.343, p>0.05) on its usage is insignificant. Hence, we conclude that the higher employee's education, the higher is employee's usage of knowledge management. It follows, therefore, a higher level of education is associated with higher usage of this tool in Slovenia. The three predictors' variables explain 24% of the variance in the employees' usage of knowledge management.

Total quality management: *education* and *position* are highly significant predictors of total quality management use by employees in Slovenian organizations (C.R. = -7.022, *p<0.001*; C.R. = -3.183, *p < 0.05*, respectively). Education is significantly and negatively correlated with the usage of total quality management (β = -0.494); and position is significantly and negatively correlated with use of this tool (β = -0.222). The effect of working years on its usage is insignificant (C.R. = 0.807, p>0.05). Hence, we conclude that the higher employee's education and the higher employee's position in organization, the higher is employee's usage of total quality management. Hence a higher level of education and higher hierarchical position in organization are associated with higher usage of this tool in Slovenia. The three predictor variables explain 36% of the variance in the employees' usage of total quality management.

Discussion

This paper has examined the influence of organizational factors on usage of management tools in Slovenian organizations.

We outline cognitions about patterns of management tools usage in the compared regions. Further on we discuss the cognitions about the impact of single factors on usage of the selected management tools, as well as the cognitions about factors considered as linear combination, both in Slovenian organizations.

A comparison of the use of single management tools in samples from Slovenia, North America, Europe, and the Globe reveals the following. The most used management tools Worldwide (namely strategic planning, customer relationship management, and customer segmentation) are not among most used by Slovenian employees — and vice versa.

Currently the most used management tools in Slovenian organizations establish competitive organizational design. In that framework management tools support organizational efforts to build their operations on core processes, implementing best practices, defining competitive advantage of the organization, acquiring knowledge, etc. Thus, employees within organizations (most) frequently use outsourcing, benchmarking, core competencies, knowledge management, and total quality management.

Giving priority in use to management tools supporting establishment of competitive organization, are in line with cognitions in literature, emphasizing the need for substantial organizational transformation in organizations in former transitional countries (Newman, Nollen, 1998; Melnikas, 2008; Saparnot, 2011).

Testing the impact of selected factors, among a plethora of possible factors that influence usage of management tools, reveals that incorporating the impact of type of education, organizational size, department in organization, and economic sectors, does not importantly contribute to the explanation of usage of management tools. On average incorporation of four new factors, contribute to explaining approximately and merely another 1 to 3 % of the variance of usage of five most used management tools. For outsourcing increase of 3 % is mainly due to the organizational size, for benchmarking increase of 3 % is attributed to type of education, as well as for core competencies. While for the knowledge management and total quality management, the impact of four new factors is insignificant.

Results about individual impact of education, position, and working years on top five most used management tools usage among Slovenian employees let us most generally conclude the following. Among the three considered predictors education has the strongest impact on usage of all management tools. The impact of education is moderate or strong, and the strength of impact is very similar for all considered tools. Therefore we can conclude that the higher employees' education level is, the higher is the usage of single management tools.

Position held within the organization weakly or moderately impacts the usage of three out of five considered tools, and the strength of the impact is very similar for all three tools. We can conclude that when the impact exists, then the higher position of employee in organization is associated with higher usage of such single management tool.

The impact of working years on usage of management tools is evidently very weak, even though statistically significant. Impact is evident for two out of five considered management tools. In general, the results suggest that the use of single management tool declines when employees gain more experience with more working years.

The approach to viewing usage of single tool supports the argument that education impacts all considered management tools. It is also evident that usage of outsourcing, benchmarking, and total quality management depends upon education and position, while position has no impact on usage of core competencies and knowledge management. The working experiences impact benchmarking, core competencies, and knowledge management, while having no impact on outsourcing and total quality management. It is evident that only benchmarking is influenced by all three factors, while usage of other tools is influenced by two factors.

Next we shift to more holistic approach to investigate the impact of selected factors on the usage of single management tool. We compare the results of the impact of education, position, and working years on each predictor (hypotheses 1, 2, and 3) and then we identify the simultaneously impact of the three predictors on the usage of each single management tool (hypothesis 4). Cognitions are summarized in Table 2.

Table 2

Significant impact on the usage of single management tools

Management tools	**Significant impact on the usage of single management tools**		
	Education	***Position***	***Working years***
	Single analysis		
Outsourcing	**	*	
Benchmarking	***	*	*
Core competencies	**		*
Knowledge management	**		*
Total quality management	***	**	
	Simultaneous analysis		
Outsourcing	***(-)*	* *(-)*	
Benchmarking	** *(-)*	* *(-)*	
Core competencies	** *(+)*		
Knowledge management	** *(-)*		
Total quality management	** *(-)*	* *(-)*	

*X*** - strong statistically significant correlation (between 0.50 and 1.00)*
*X** - moderate statistically significant correlation (between 0.30 and 0.50)*
X - weak statistically significant correlation (between 0.00 and 0.30)*
() - in brackets we outline if the impact of single predictor variable considered simultaneously (as a linear combination of three variables) is weaker (-) or is stronger (+) in comparison to isolated influence of single predictor.

From Table 2 it is evident that the impact of all predictor variables is weaker in majority cases, under a more holistic approach.

When we consider the three predictors simultaneously several differences arise. Regarding outsourcing we can conclude that education still has the strongest influence and the impact of position remains at the same level. Results for benchmarking reveal that the impact of all predictor variables is weaker, while impact of working years is insignificant. Core competences are in this case dependent only upon education, and so is knowledge management. For total quality management the impact of both education and position is weaker.

More holistic consideration of the impact of education, position, and working years shows that education still has strongest impact on usage of single management tool, followed by weaker impact of position. Impact of working years is not significant anymore. These cognitions are in line with findings from research practice, since it is evident that when different factors are considered simultaneously, the impact of single factor is lower, since other factors are also considered in the analysis (Leech et al., 2008; Byrne, 2010).

Based on the requisitely holistic consideration of the impact of selected factors on usage of management tools we can summarize that the impact of education is the most important — since employees gain most knowledge about single management tools in their formal education process (i.e., cognitive knowledge) (see: Cole, 2004; Daft, 2009; Hughes et al., 2009; Mullins, 2010). This could lead us to the conclusion that more highly educated employees have more formal knowledge, which includes knowledge about the particular single management tools. Our results confirm that employees with higher level of education are more apt to use the management tool, than employees with lower education.

Regarding the impact of position we can conclude that usage of the tool could be related either to the specific level of organization, but the relationship found is not as strong as for education (Cooper, Argyris, 1998; Armstrong, 2006; Buchanan, Huczynski, 2010). Therefore we can argue that the tool tends to be used more at specific organizational levels. For example, in business practice outsourcing is primarily used at higher organizational levels, while some tools like knowledge management and core competencies could be used at all organizational levels. Our results do reveal that, knowledge management usage and core competencies usage do not depend upon position. This could be attributed, for example, to the fact that a lot of dynamic and innovative work is needed for using these two tools, which therefore depend more upon the employees themselves and their personality, than position in the organization. We can also state that employees in hierarchically higher positions more frequently use single management tools than those on lower levels.

Both the number of working years, including the working experiences, have very weak impact (hypothesis 3) and are insignificant and weak (hypothesis 4). The trend shows the more experienced people are less likely to use management tools. These findings match cognitions from management (Daft, 2009; Hughes et al., 2009; Mullins, 2010) and psychological literature (Rokeach, 1973; Schwartz, 1999; Buchanan, Huczynski, 2010).

Results about the impact of three predictor variables reveal that the selected three factors explain differences in variance in usage of all of the single management tools considered here. In that frame the linear combination of education, position, and working years, accounts for 36 % of the variance of total quality management usage, followed by 32 % for benchmarking, 25 % for core competencies, 24 % for outsourcing, and 24 % for knowledge management.

The remaining variance in usage of single management tools cannot be explained by the proposed model, and it is thus attributed to the unique factor Er1. This in turn could be attributed to the fact that the selected factors influence single management tool usage by employees in organizations (Lock, 1992; Cole, 2004; Daft, 2009; Mullins, 2010). Those are therefore factors that also impact the management tools usage, but not all of them appear in our model. We can conclude that explanation power of the three selected factors is satisfactory, since they explain between 24 % and 36 % of variance in the usage of selected management tools.

Based on presented results and discussion we can support Hypotheses 1 and 4. We partly support Hypotheses 2 and 3.

Conclusions

The primary aim of our study was to undertake a deeper examination of organizational factors having the influence on five most used management tools in Slovenian organizations.

International comparison of management tool usage reveal that tools used in Slovenian organizations are those that aim to make the organization more competitive, while the most used tools worldwide are not among the top five in Slovenia. The pattern revealed of the usage of management tools in Slovenian organizations indicates in forefront are tools supporting organizational efforts to design more competitive working and behavior. Thus, organizations and their employees most frequently use outsourcing, benchmarking, core competencies, knowledge management, and total quality management. Management tools most used worldwide (i.e., strategic planning, customer relationship management, and customer segmentation) are not among most used among Slovenian employees. Giving priority to above tools, results in neglect of tools aimed at supporting customer services.

We continue further deeper examination of top five most used management tools in Slovenian organizations, with preliminary analysis about influence of organizational factors on their usage. Education, position, and working years have substantial impact.

Among the considered three factors, education has the strongest impact on the usage of the considered five management tools in Slovenia, while the impact of employees' position in organization is somewhat weaker. The impact of working years is very weak.

In general we can conclude that the impact of education, position, and working years on single management tool usage is weaker when we take into consideration all three predictors simultaneously. This means that when we evaluate the impact of one predictor, the other two are also considered. This says that education and position have weaker impact on management tools usage, while the impact of working years has become insignificant.

Results about top five management tools used by employees' in Slovenian organizations allow us to conclude the following about the impact of education, position, and working years: (1) the higher employee's education level, the higher is the usage of single management tool, and (2) higher position of the employee in organization is associated with higher usage of single management tool. While the impact of working years on usage of management tools is very weak.

The study of factors of management tool usage is limited to selected three organizational factors and just five most commonly used management tools in Slovenian organizations. The outlined limitations present the most probable further research directions. Further research should include more management tools, in order to check the validity of our hypotheses and generalization about impact of the three selected predictors — also on the other known management tools.

References

Armstrong, M. (2006). *A Handbook of Management Techniques.* Kogan Page, London.

Buchanan, F., & Huczynski, A. (2010). *Organizational Behaviour.* Pearson, Harlow.

Byrne, M. (2010). *Structural Equation Modeling with AMOS.* Taylor, New York.

Certo, S., & Certo, T. (2009). *Modern Management.* Pearson, Harlow.

Chatman, J., & Jehn, K. (1994). Assessing the Relationship between Industry Characteristics and Organizational Culture: How Different Can You Be? *The Academy of Management Journal, 37*(3), 522-553. http://dx.doi.org/10.2307/256699

Cole, G. (2004). *Management Theory and Practice.* Thomson, London.

Collins, J., & Porras, J. (2008). Organizational Vision and Visionary Organizations. *California Management Review, 50*(2), 117-137.

Cooper, C., & Argyris, C. (1998). *The Concise Blackwell Encyclopedia of Management.* Blackwell, Malden.

Daft, R. (2009). *The New Era of Management.* South-Western College, Cincinnati.

Etzioni, A. (1997). *Modern Organizations.* Prentice-Hall, New York.

Franken, A., Edwards, C., & Lambert, R. (2009). Executing Strategic Change: Understanding the Critical Management Elements that Lead to Success. *California Management Review, 51*(3), 49-73.

Ginevicius, R. (2010). The Effectiveness of Cooperation of Industrial Enterprises. *Journal of Business Economics and Management, 11*(2), 283-296. http://dx.doi.org/10.3846/jbem.2010.14

Greenwood, R., & Miller, D. (2010). Tackling Design Anew Getting Back to the Heart of Organizational Theory. *The Academy of Management Perspectives, 24*(4), 78-88. http://dx.doi.org/10.5465/AMP.2010.55206386

Ho, R. (2006). *Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS.* Chapman & Hall, Boca Raton. http://dx.doi.org/10.1201/9781420011111

Hughes, R., Ginnett, R., & Curphy, G. (2009). *Leadership: Enhancing the Lessons of Experiences.* McGraw-Hill Book, Boston.

Ittner, C., & Larcker, D. (1997). The Performance Effects of Process Management Techniques. *Management Science, 43*(4), 522-534. http://dx.doi.org/10.1287/mnsc.43.4.522

Kleindorfer, P., Kalyan Singhal, K., & Van Wassenhove, L. (2005). Sustainable Operations Management. *Production and operations management, 14*(4), 482-492. http://dx.doi.org/10.1111/j.1937-5956.2005.tb00235.x

Laamanen, T., & Wallin, J. (2009). Cognitive Dynamics of Capability Development Paths. *Journal of Management Studies, 46*(6), 950-981. http://dx.doi.org/10.1111/j.1467-6486.2009.00823.x

Leech, L., Barrett, C., Morgan, A. (2008). *SPSS for Intermediate Statistics.* Taylor & Francis, New York.

Leiponen, A., Helfat, C. (2010). Innovation Objectives, Knowledge Sources, and the Benefits of Breadth. *Strategic Management Journal, 31*(2), 224-236.

Linstead, S., Fulop, L., & Lilley, S. (Eds.) (2009). *Management & Organization: A critical text.* Palgrave – MacMillan, New York.

Lock, D. (Ed.) (1992). *Handbook of Management*. GOWE, Aldershot.

Melnikas, B. (2008). The Knowledge-based Economy in the EU: Innovations, Networking and Transformation Strategies. *Transformations in Business and Economics, 7*(3), 170-193.

Morgan, J., & Wang, R. (2010). Tournaments for Ideas. *California Management Review, 52*(2), 77-97. http://dx.doi.org/10.1525/cmr.2010.52.2.77

Mullins, L. (2010). *Management and Organizational Behavior.* Prentice Hall, New York.

Newman, K., & Nollen, S. (1998). *Managing Radical Organizational Change: Company Transformation in Emerging Market Economies.* Sage Publications, London.

Oswick, C., Fleming, P., & Hanlon, G. (2011). From Borrowing to Blending: Rethinking the Processes of Organizational Theory Building. *The Academy of Management Review, 36*(2), 318-337. http://dx.doi.org/10.5465/AMR.2011.59330932

Pascale, R. (1990). *Managing on the Edge.* Simon & Shuster, New York.

Potocan, V., Mulej, M., & Kajzer, S. (2005). Business Cybernetics. *Kybernetes, 34*(9/10), 1496-1516. http://dx.doi.org/10.1108/03684920510614786

Potocan, V., & Mulej, M. (2009). Business Cybernetics - Provocation Number Two. *Kybernetes, 38*(3/4), 93-112. http://dx.doi.org/10.1108/03684920910930295

Potocan, V., & Nedelko, Z. (2010). *Personal values of members in Slovenian organizations (In Slovene).* FEB, Maribor.

Rigby, D. (2001). A Management tools for turbulent times. *Strategy & Leadership,* 29(6), 8-12. http://dx.doi.org/10.1108/EUM0000000006529

Rigby, D., & Bilodeau, B. (2007). *Management tools and trends 2007.* Available at: http://www.bain.com/ (accessed 12 April 2011).

Rigby, D., & Bilodeau, B. (2009). *Management tools and trends 2009*. Available at: http://www.bain.com (accessed 12 April 2011).

Rigby, D. (2011). *Management tools.* Available at: http://www.bain.com (accessed 12 April 2011).

Rokeach, M. (1973). *The nature of human values.* The Free Press, New York.

Sapkauskiene, A., & Leitoniene, S. (2010). The Concept of Time-Based Competition in the Context of Management Theory. *Inzinerine Ekonomika-Engineering Economics*, 21(2), 205-213.

Schermerhorn, J. (2009). *Introduction to Management.* Wiley, New York.

Schreiner, M., Kale, P., & Corsten, D. (2010). What Really is Alliance Management Capability and How Does it Impact Alliance Outcomes and Success? *Strategic Management Journal, 30*(13), 1305-1419.

Schroth, H. (2011). It's Not About Winning, It's About Getting Better. *California Management Review, 53*(4), 134-153. http://dx.doi.org/10.1525/cmr.2011.53.4.134

Schwartz, S. (1999). A Theory of Cultural Values and Some Implications For Work. *Applied Psychology, 48*(1), 23-47. http://dx.doi.org/10.1111/j.1464-0597.1999.tb00047.x

Soparnot, R. (2011). The Concept of Organizational Change Capacity. *Journal of Organizational Change Management, 24*(5), 640-661. http://dx.doi.org/10.1108/09534811111158903

Strandskov, J. (2006). Sources of Competitive Advantages and Business Performance. *Journal of Business Economics and Management, 7*(3), 119-129.

Valackiene, A. (2011). Theoretical Substation of the Model for Crisis Management in Organization. *Inzinerine Ekonomika-Engineering Economics, 22*(1), 78-90.

Zavrsnik, B. (2007). Critical Success Factors for International Fashion Retailers Entering Foreign Markets. *Fibers and Textiles in Eastern Europe, 15*(4), 13-17.

Vojko Potocan, Zlatko Nedelko, Matjaz Mulej

Organizacinių veiksnių įtaka naudojant valdymo būdus/įrankius Slovėnijos organizacijose

Santrauka

Šiuolaikinėje aplinkoje organizacijos gali išlikti ilgam tik nuolat tobulindamos savo verslą. Dėl šios priežasties valdymas turi nuolat pergalvoti ir atnaujinti savo verslo organizavimą. Valdymas gali pagerinti organizacijų darbą ir elgesį panaudodamas tinkamas valdymo koncepcijas, kurios leidžia organizacijoms atitinkamai sustiprinti savo verslą. Valdymo teorija apima įvairias valdymo idėjas ir sukuria valdymo koncepcijas, kurios nagrinėja pasirinktas svarbias vidines ir išorines, turiniu susietas ir metodologines verslo sistemas (pvz., filosofijas, metodus, kryptis, nagrinėjamos aplinkos savybes, svarbius santykius ir pagrindinius organizavimo ir valdymo klausimus). Skirtingoms valdymo koncepcijoms taip pat egzistuoja skirtingos metodikos. Tai metodų, taisyklių rinkinys ir disciplinos sąlygos, metodai pvz., tikslo siekimas ir procedūrų problemos sprendimo tipai (ypač reguliarūs ir sisteminiai duoto tikslo nustatymo ir pasiekimo būdai), technikos – tokios kaip būdas, kuriuo yra nagrinėjamos techninės detalės ir įrankiai (literatūroje apie valdymą taip pat vartojamas terminas *valdymo instrumentai*). Šiame tyrime, siekiant išsamiau išnagrinėti valdymo būdus, buvo sukurtas modelis – kaip galimas (ar pasirinktas) lygis valdymo koncepcijoms nagrinėti. Vėliau buvo suvokta, kad galima sukurti įvairius valdymo *įrankius/ būdus*, kurie gali būti svarbūs įvertinant jų teikiamą naudą vartotojams (ypač kai atsiranda galimybė juos palyginti su kitais įrankiais). Literatūroje autoriai užsimena apie palyginimo procesą, pvz.: skirtingas supratimas ir kontekstinis būdų supratimas, kelių būdų panaudojimas vienu metu, įvairūs būdų dydžiai ir jų panaudojimas skirtinguose lygiuose arba skirtingose organizacijose ir t.t. Ne visi valdymo būdai gali būti palyginami – pvz., kai kurių jų palyginimas yra problemiškas ar beveik neįmanomas, nes kiekvienas būdas buvo sukurtas tam tikram individualiam tikslui, todėl kiekvienas būdas/įrankis taip pat turi skirtingų tikslų. Pagrindinis šio *darbo tikslas* yra išnagrinėti svarbių organizacinių veiksnių įtaką tam tikrų atskirų valdymo būdų/įrankių panaudojimui Slovėnijos organizacijose. Tyrime nagrinėti: 1) valdymo įrankių panaudojimo modeliai skirtingose pasaulio vietose, 2) atskirų organizacinių veiksnių, t.y. darbuotojų išsilavinimo, pareigų ir išdirbtų metų įtaka valdymo įrankių panaudojimui Slovėnijos organizacijose, ir 3) pasirinktų veiksnių tiesinio derinio įtaka valdymo įrankių panaudojimui Slovėnijos organizacijose. Kelių skirtingų valdymo įrankių/ būdų palyginimas (jų savybių, vartotojų pasirinkimo, silpnybių, panaudojimo, galimų rezultatų ir t.t. lyginimas) yra labai sudėtingas ir beveik neįmanomas dėl su kontekstu susijusių metodologinių skirtumų. Dėl tos priežasties autoriai sutelkė dėmesį į holistinę tiesioginę diskusiją apie skirtingas valdymo priemones, palygindami holistinį tiesioginį ar netiesioginį dviejų kontekstiškai panašių priemonių palyginimą ir dalinę (mažiau holistinę) netiesioginę diskusiją apie pasirinktą požiūrį į kai kuriuos valdymo įrankius. Tyrimas atliktas Slovėnijos organizacijų darbuotojų 2010 metais. Mūsų stebėjimas siejasi su klausimais apie naudojimą, pasitenkinimo būdų žinojimą, norą naudoti ir susipažinti su tam tikromis valdymo priemonėmis. Buvo išsiųsta 750 anketų pasirinktoms organizacijoms Slovėnijoje. Tyrime panaudoti 155 dalyvių atsakymai iš 210 gautųjų. Hipotezei patikrinti pritaikėme regresijos analizę, naudodami SPSS, o vėliau tikrinome panaudodami AMOS, kurioje teigiama, kad valdymo priemonių panaudojamas yra nuspėjamas kaip tiesinis trijų pasirinktų stebėtų nepriklausomų kintamųjų derinys. Pagrindinis tarptautinio palyginimo tikslas yra atrasti ir apibrėžti valdymo būdų panaudojimo pasauliniu mastu modelį, paskatinti didesnį valdymo būdų/įrankių panaudojimą Slovėnijoje ir palyginti tai pasaulio mastu. Buvo nustatyta, kad bendras valdymo priemonių panaudojimas Slovėnijoje yra panašus į panaudojimą pasauliniu mastu, t.y., palyginus šias priemones vartotojų organizacijose paaiškėjo, kad procentinė išraiška yra tokia pati. Kai kurie skirtumai išryškėja atskirų valdymo priemonių panaudojimą lyginant su panaudojimu kituose regionuose, pvz.: Šiaurės Amerika ir Europa. Taigi, nustatyta, kad dažniausiai pasaulyje naudojamas valdymo būdas yra strateginis planavimas, kuris Slovėnijoje užima tik 8-ą vietą. Panašiai ir vartotojų skirstymas segmentais, kuris yra aukštai vertinamas nagrinėjamuose regionuose, tačiau Slovėnijoje yra tik 11-as. Situacija su *outsourcing* yra priešinga: tai dažniausiai naudojamas valdymo būdas/įrankis Slovėnijos organizacijose, o pasaulyje jis yra vertinamas tarp 5-os ir 7-os vietų. Mūsų pagrindinis dėmesys buvo sutelktas į tų atrinktų veiksnių įtaką, kurie darė įtaką darbuotojų pasirinkimui naudoti valdymo būdus. Preliminarūs testai parodė, kad trys iš septynių nagrinėtų veiksnių: išsilavinimas, pareigos ir išdirbti metai, daro didelę įtaką naudojantis valdymo priemonėmis. Kitų keturių veiksnių (išsilavinimo tipas, organizacijos dydis, darbuotojų skyrius ir organizacijos pramonės šaka) įtraukimas, nebuvo toks naudingas siekiant paaiškinti valdymo būdus. Todėl, tolesnėje analizėje buvo nagrinėjami tik veiksniai, susiję su išsilavinimu, pareigomis ir išdirbtais metais. Dėl tam tikrų apribojimų mes patikrinome savo hipotezes penkių, dažniausiai naudojamų valdymo būdų, būtent *outsorcing* gairių nustatymo, pagrindinių kompetencijų, žinių valdymo ir bendros kokybės valdymo, tarp Slovėnijos organizacijos darbuotojų. Dėl skirtingų veiksnių įtakos, pasirinktų valdymo priemonių panaudojimo, rezultatai parodė, kad išsilavinimas daro stipriausią įtaką visų nagrinėtų valdymo būdų panaudojimui. Darbuotojo

pareigos organizacijoje turi nedidelę reikšmę trims iš penkių nagrinėtų būdų/įrankių; išdirbtų metų įtaka, nors statistiškai yra svarbi, tačiau turi labai mažą įtaką. Vertinant atskirai valdymo būdų perspektyvas, akivaizdu, kad keturiems iš penkių, įtaką daro du veiksniai. Darbuotojų išsilavinimas ir pareigos daro įtaką *outsourcing* ir visos kokybės valdymo panaudojimui, o išsilavinimas ir išdirbti metai daro įtaką pagrindinių kompetencijų ir žinių valdymo panaudojimui. Visi trys veiksniai įtaką daro tik gairėms. Mūsų tolesnio tyrimo metodas yra tikslesnis nagrinėjant išsilavinimą, pareigas ir išdirbtų metų įtaką naudojant pasirinktą valdymo priemonę. Mes nagrinėjome trijų prognozuojamų dalykų įtaką vienu metu. Atskirų prognozuojamų dalykų įtakos pasirinktam atskiram valdymo būdui tyrimo rezultatai ir rezultatai, kurie leido mums teigti, kad atskiro valdymo būdo panaudojimas yra prognozuojamas kaip išsilavinimo, pareigų ir išdirbtų metų veiksnių tiesinis derinys, palyginimas parodė, kad visų trijų prognozuojamų kintamųjų įtaka yra silpnesnė naudojant holistinį metodą. Analizuojant nustatyta, kad išsilavinimas vis dar daro stipriausią įtaką tam tikriems valdymo būdams, po to eina silpnesnė darbuotojo pareigų įtaka. Išdirbtų metų įtaka neturi reikšmės panaudojimui. Tokiu būdu, žvelgiant iš skirtingų valdymo priemonių perspektyvų, yra akivaizdu, kad *outsourcing*, gairių ir visos kokybės valdymo panaudojimui įtaką daro išsilavinimas ir pareigos, nors pagrindinių kompetencijų ir žinių valdymo panaudojimas priklauso tik nuo išsilavinimo. Išsilavinimo įtaka žinių valdymui yra silpnesnė, nei paėmus atskirai išsilavinimą. Remdamiesi gautais rezultatais, galime apibendrinti, kad išsilavinimas daro svarbiausią įtaką valdymo priemonių panaudojimui. Toks pažinimas yra lygiavertis lyginant su rezultatais, pateiktais bendrojoje literatūroje apie valdymą, kurioje teigiama, kad darbuotojai daugiau išmoksta apie atskirus valdymo būdus patys lavindami save (t.y., pažinimo žinios) (Cole, 2004; Daft, 2009; Mullins, 2010). Todėl mes galime daryti išvadą, kad aukštesnį išsilavinimo lygį turintys darbuotojai labiau linkę naudoti įvairesnius valdymo būdus, nei žemesnį išsilavinimą turintys darbuotojai. Dėl įmonėje užimamų pareigų, kitokio valdymo būdo panaudojimas gali būti susietas su tam tikrais organizaciniais lygiais (Cooper, Argyris, 1998; Armstrong, 2006). Mūsų rezultatai parodė, kad *outsourcingas* yra naudojamas pirmiausia aukštesniuose organizacijos lygiuose, tačiau minėtina tai, kad žinių valdymas ir pagrindinių kompetencijų panaudojimas nėra susiję su tam tikrais organizaciniais lygiais. Dažniausiai mes galime daryti išvadą, kad aukštesnes pareigas hierarchijoje užimantys darbuotojai dažniau naudoja skirtingus valdymo būdus, nei žemesnes pareigas užimantys žmonės. Tirta išdirbtų metų įtaka yra labai maža, todėl patvirtinama hipotezė, kad kuo žmonės tampa labiau patyrę (pvz., vyresni) tuo mažiau tikėtina, kad jie naudosis kai kuriais valdymo būdais. Mūsų pažinimas yra lygiavertis valdymui (Daft, 2009; Mullins, 2010) ir psichologijos išmanymui (Rokeach, 1973; Schwartz, 1999; Rigby, Bilodeau, 2007, 2009, 2011). Tai, kaip darbuotojai naudoja valdymo būdus organizacijose, tam turi įtaką vairūs veiksniai (Lock, 1992; Armstrong, 2006; Daft, 2009), iš kurių ne visi pateikti mūsų modelyje. Remiantis atskirų nagrinėjamų valdymo būdų panaudojimo variantų paaiškinimu kiekio rezultatais, mes galime daryti išvadą, kad trijų nagrinėjamų prognozuojamų dalykų, t.y., išsilavinimo, pareigų, ir išdirbtų metų paaiškinimas yra pakankamas, nes jie paaiškina nuo 24 % iki 36 % pasirinkto valdymo priemonių/įrankių panaudojimo variantų. Dažniausiai galime daryti išvadą, kad jei įtaka egzistuoja, tai kuo aukštesnis dirbančiojo išsilavinimo lygis, tuo labiau tikėtina, kad bus naudojami kitokie valdymo būdai. Taigi galima teigti, kad kuo aukštesnės pareigos organizacijoje, tuo valdymo būdai bus panaudoti įvairesni.

Raktažodžiai: *valdymas, valdymo būdai, priemonės, įrankių panaudojimas, įtaka būdų panaudojimui, organizaciniai veiksniai*

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