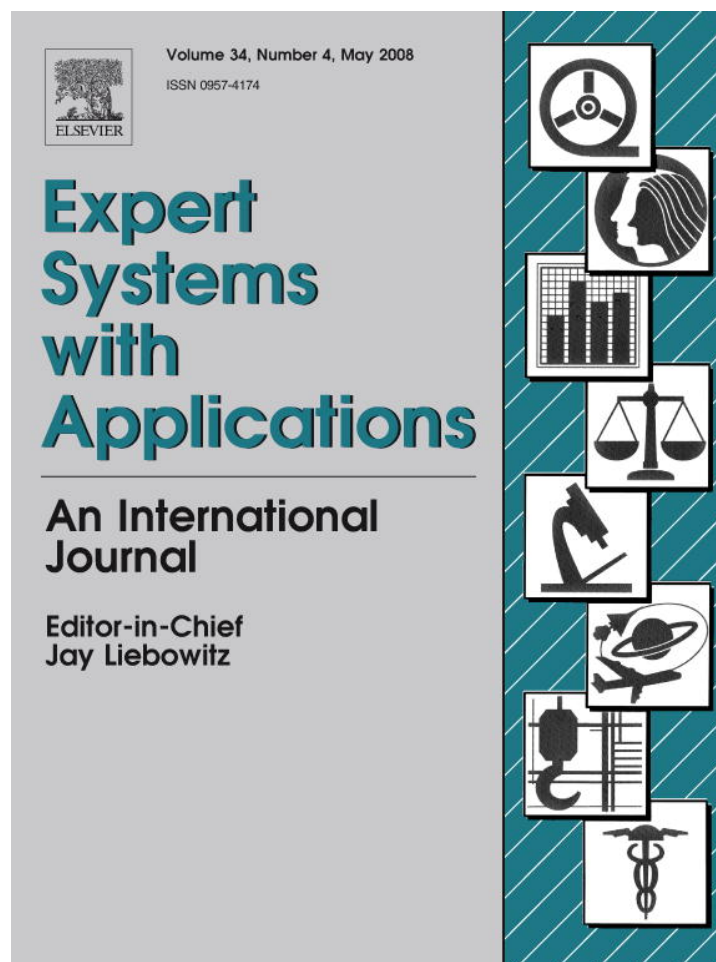


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Comparative analysis of the organisational learning process in Slovenia, Croatia, and Malaysia

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Abstract

Several empirical studies have proved that better organisational learning induces higher organisational performance. However, none of them addressed the issue of organisational learning process simultaneously in several countries. In our contribution, we aim to test differences in the way companies learn in Slovenia, Croatia, and Malaysia. We used the OLIMP questionnaire, a measurement instrument developed and tested by [Dimovski, V. (1994), Organisational learning and competitive advantage. PhD Thesis, Cleveland, Ohio; Dimovski, V., & Škerlavaj, M. (2005). Performance effects of organisational learning in a transitional economy. *Problems and Perspectives in Management* 3(4), 56–67]. It employs three measurement variables (information acquisition, information interpretation, and behavioural and cognitive changes) as well as 38 items (presented in the paper) to measure the organisational learning construct. In autumn 2005 data from 203 Slovenian, 202 Croatian and 300 Malaysian companies were gathered. The results indicate that companies in all three countries under scrutiny are closest in terms of behavioural and cognitive changes, meaning that globalisation and other challenges of the modern business environment demand all of them to change and adapt quickly. However, the ways they are coping with these challenges are different. There are more similarities than dissimilarities between Slovenia and Croatia, while this is not the case when comparing both countries to Malaysia. When acquiring information, Slovenian and Croatian companies rely more on internal sources (own employees, past decisions, etc.), while Malaysian companies tend to rely more on external sources and more often have employees dedicated to searching for external information. When trying to interpret the information acquired, Slovenian and Croatian companies rely more on personal contacts, informal team meetings and believe that information given to subordinates must be simple and concise, while Malaysian companies tend to use more formal collective decision-making and written communication to understand the meaning of information.

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1. Introduction

Modern companies operate in a constantly varying and highly unstable business environment. There is a constant need for them to change and learn at individual, group, organisational and inter-organisational levels (Sanchez, 2005). Organisational learning is considered to be one of the most promising concepts in modern managerial litera-

ture. According to de Geus, the ‘ability to learn faster than your competitors might be the only sustainable competitive advantage you have’ (De Geus, 1988). Indeed, extensive empirical research provided support for the notion that companies that manage their organisational learning processes better are also better-off in terms of financial and non-financial results (e.g. Bontis, Crossan, & Hulland, 2002; Jimenez-Jimenez & Cegarra-Navarro, 2007; Škerlavaj & Dimovski, 2006; Škerlavaj, Indihar Štemberger, Škrinjar, & Dimovski, 2007). The list of studies that examine link organisational learning-organisational performance is extensive and they all found positive influence.

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However, none of them addressed organisational learning as the process dependent upon the context of national culture in which companies operate.

We aim to fill this gap in the literature by providing a cross-cultural comparison of organisational learning process in companies in three countries (two homogeneous and two heterogeneous). The research was simultaneously conducted in 2005 in Slovenia, Croatia and Malaysia in order to find an answer to the following research question: What are the differences and which are the similarities among Slovenia, Croatia and Malaysia in the way their companies learn? The organisational learning measurement instrument developed by Dimovski (1994), and Dimovski and Škerlavaj (2005). Data were gathered from the top and middle management representatives of companies with more than 50 employees.

The paper has five main sections. First, organisational learning process is defined and compared against knowledge management and learning organisation. Second, the constructs for its measurement are described in more detail. Third, the data gathering and sample descriptions are presented. Fourth, the data are analysed using an analysis of variance methodology. Finally, the implications of our findings from research as well as managerial standpoints are discussed, while the paper is concluded with a presentation of the limitations and some future research proposals.

2. The organisational learning field and definition

2.1. Organisational learning, knowledge management, and learning organisation

Organisational learning remains a very popular concept in the modern managerial literature. Yet it has often been confused with a few other concepts – most often with knowledge management and the learning organisation. The distinction between organisational learning and the learning organisation has been explained to the extent that organisational learning refers to the study of learning processes of, within and between organisations, largely from an academic point of view. On the other hand, the learning organisation has been considered as an entity – an ideal form of organisation which has the capacity to learn effectively and hence to prosper (Easterby-Smith & Lyles, 2003; Tsang, 1997). Besides the structure vs. process differentiation, the distinction between organisational learning and the learning organisation can also be seen from another perspective. While organisational learning has the propensity to be positive and descriptive, the idea of the learning organisation (Senge, 1990) tends to be normative, prescriptive in its nature and tries to provide organisations with a model to organise their systems, structures and processes in a way that leads towards improved organisational performance. On the other hand, the knowledge management literature has frequently adopted a technical approach to disseminating and lever-

aging knowledge in order to enhance organisational performance. Information-communication technologies are central to such discussions, even though knowledge management does extend beyond that and can be best defined as the process of creating value from an organisation's intangible assets (Liebowitz, 1999, 2000; Liebowitz & Beckman, 1998; from Liebowitz, 2001). Such an understanding of knowledge management goes beyond information and document management and emphasises several aspects which are also important for organisational learning process (e.g. knowledge sharing culture – see Škerlavaj et al., 2007 for the empirical study of organisational learning culture and performance). Hence, we consider organisational learning and knowledge management to be two sides of equally important coin. Organisational learning theoretically complements practicality of knowledge management and vice-versa.

2.2. Definitions of organisational learning

Despite and maybe even because of its importance, organisational learning has numerous definitions and there are many perspectives in the field. This is consistent with the findings of the few early authors. According to Shrivastava (1983), the vast majority of research in the area has been fragmentary and incomplete. To present just few of them, Senge (1990) defines organisational learning as 'a continuous testing of experience and its transformation into knowledge available to the whole organisation and relevant to their mission', while Huber (1991) sees it as a combination of four processes: information acquisition, information distribution, information interpretation and organisational memory. Argyris and Schön (1978) are even less restrictive in their definition, declaring that organisational learning emerges when organisations acquire information (knowledge, understanding, know-how, techniques and procedures) of any kind by any means. A more recent research has come to differentiate among information and knowledge by stating that information is patterned data and knowledge is capability to act (Liebowitz, 2001). Organisational learning process should then transform information into knowledge.

Jones (2000) emphasises the importance of organisational learning for organisational performance defining it as 'a process through which managers try to increase organisational members' capabilities in order to better understand and manage the organisation and its environment to accept decisions that increase organisational performance on a continuous basis' (Jones, 2000, p. 472), Dimovski (1994) provides an overview of previous research and identifies four perspectives on organisational learning. His model manages to merge informational, interpretational, strategic and behavioural approaches to organisational learning and defines it as a process of information acquisition, information interpretation and resulting behavioural and cognitive changes, which should, in turn, have an impact on organisational performance.

3. Operationalisation of organisational learning process

The next issue is how to measure organisational learning process? Let us start by describing each one of the three variables involved: information acquisition, information interpretation, and behavioural and cognitive changes.

3.1. Information acquisition

Organisational learning process starts with the collection of information from both internal and external sources. When assigned adequate importance, these three sub-dimensions allow employees to constantly update their work-related information base. The purpose of acquiring information is to reduce uncertainty (Daft & Lengel, 1986). Internal sources of information acquisition involve treating employees as an important information source, relying on past decisions when accepting new ones, encouraging employees to take part in formal and informal networks of people, and grasping knowledge from other organisational units within the same company. External information acquisition refers to hiring external experts, acquiring information from other managers, consultants, etc. It means collecting information from sources outside of the company and even explicitly rewarding employees who are a source of such quality information.

3.2. Information interpretation

Information must be given meaning. 'Interpretation is the process of translating events, of developing models for understanding, of bringing out meaning, of assembling conceptual schemes' (Weick & Daft, 1984). The purpose of interpreting information is to reduce the ambiguity related to information. Ambiguity can be defined as the existence of multiple and contradictory explanations of the situation at hand (Daft & Lengel, 1986).

Two attributes describe information interpretation: richness of media and 'top-down' processing (Daft & Weick, 1984). Richness of media relates to their capability of various forms of media to process information. The richest medium is personal contact followed by telephone conversations, written memorandums, letters and special reports, while the formal chain of command is the 'poorest' medium (Daft & Lengel, 1986). Modern media, for instance, involve videoconferences as 'richer' media and electronic mail or intranet as 'poorer' forms of media for interpreting information. The 'top-down' concept of processing assumes that individuals' past experiences, and the context in which they were obtained, reaffirm the valid analytical framework to understand future developments. The purpose of 'top-down' processing is to improve how employees at lower levels of the organisational structure understand information and it depends on the level of details and frequency of information cycles or information dissemination using various communication channels (Daft & Weick, 1984).

Recent research in the area of organisational learning culture and organisational performance (Škerlavaj et al., 2007) has demonstrated that information interpretation also differs in the way people get together in order to understand the information acquired and distributed. Some vehicles might be formal such as official memorandums, expert reports, seminars and similar events. Other meetings might be more informal and involve team and personal meetings.

3.3. Behavioural and cognitive changes

Organisational learning is reflected in 'accompanying changes' (Garvin, 1993). Spector and Davidsen (2006, p. 65) claimed that 'learning is fundamentally about change'. If no behavioural or cognitive changes occur, organisational learning has not in fact occurred and the only thing that remains is unused potential for improvements (Fiol & Lyles, 1985; Garvin, 1993). Sanchez (2005) supported this notion by saying that 'knowledge has a value to organisations only when it is applied in action within an organisation's processes' (p. 12) and that 'organisational learning can be said to occur when there is a change in the content, conditionality, or degree of belief of the beliefs shared by individuals who jointly act on those beliefs within an organisation' (p. 16).

Two levels of learning can be observed when discussing cognitive changes. Lower-level learning reflects changes within the organisational structure which are short-term and only partly influence the organisation. Higher-level learning reflects changes in general rules and norms (Fiol & Lyles, 1985). Argyris and Schön (1978) classified learning similarly: single-loop and double-loop learning (Dodgson, 1993), discussed tactical and strategic learning, while Senge (1990) used the terms adaptive and generative learning. With lower-level learning the organisation acts passively and only adapts to the environment, whereas higher-level learning involves an active influence on the business environment.

3.4. The OLIMP questionnaire

Table 1 presents the operationalisation of the organisational learning construct, using 3 measurement variables and 38 measurement items. Each one of them was measured on 1–5 Likert scale. On various occasions the OLIMP questionnaire proved its psychometric properties (content, convergent and discriminant validity as well as reliability of both items as well as constructs). Readers interested in more detail on that matter should consult Dimovski (1994), Dimovski and Škerlavaj (2005), and Škerlavaj et al. (2007).

When measuring all items of information acquisition (INFOACQ), information sharing to subordinates (INFOINT10) and simplicity and conciseness of information to subordinates (INFOINT11) we asked the respondents about the level of their dis/agreement with the statements

Table 1
Operationalisation of the organisational learning construct

Measurement variables	Items
Information acquisition (INFOACQ)	<ul style="list-style-type: none"> • Employees as an extremely important source of information (INFOACQ1) • Previous decisions important for current decisions (INFOACQ2) • New business methods and services are always worth trying even if they may prove risky (INFOACQ3) • Reports prepared by external experts are an extremely important source of information (INFOACQ4) • Clipping service (INFOACQ5) • Competitors are an extremely important source for learning new methods and services (INFOACQ6) • Expertise on the industry, products and services is an extremely important criterion for hiring a new employee (INFOACQ7) • Joint tasks and mergers contribute a great deal of knowledge about the industry and economic environment, new methods and services/products (INFOACQ8) • Top managers in any important decision seek information or advice from the board of directors or owners (INFOACQ9) • Top managers in any important decision seek information or advice from sources outside the company (hiring experts, contacting top managers of other companies, etc.) – (INFOACQ10) • Our organisation has employees whose job is related to searching for external information (INFOACQ11) • External sources (reports, consultants, newsletters, etc.) are extremely important for the operations of our organisation (INFOACQ12) • In our organisation we explicitly reward employees who are a source of quality information (INFOACQ13)
Information interpretation (INFOINT)	<ul style="list-style-type: none"> • Personal contacts (INFOINT1) • Team meetings (INFOINT2) • Committees as decision-makers (INFOINT3) • Telephone contacts (INFOINT4) • Written memos, notes, letters, etc. (INFOINT5) • Special reports (INFOINT6) • Formal chain of command reporting (INFOINT7) • Company's intranet as a means of interpreting information (INFOINT8) • Forums (e-chat, e-debates) (INFOINT9) • The more information the subordinate has the better they will perform (INFOINT10) • Information to a subordinate must always be simple and concise (INFOINT11)
Behavioural and cognitive changes (BCC)	<ul style="list-style-type: none"> • Adaptability to environmental pressures (BCC1) • Quality of products/services (BCC2) • Number of products/services offered (BCC3) • Technology of operation (BCC4) • Speed of operations (BCC5) • Introduction of new marketing approaches (BCC6) • Average productivity of employees (BCC7) • Satisfaction of employees (BCC8) • Overall atmosphere (BCC9) • Personal communication between top managers and employees (BCC10) • Team meetings' efficiency (BCC11) • Employees' level of understanding the company's strategic orientation (BCC12) • Employee's level of understanding the major problems in the company (BCC13) • Efficiency of information systems within the company (BCC14)

Sources: Daft and Lengel (1986), Daft and Weick (1984), Dimovski (1994), Dimovski and Škerlavaj (2005), Martello (1993), Škerlavaj et al. (2007), Zahra and Covin (1993).

proposed. When evaluating the first nine measurement items for information interpretation (INFOINT1–INFOINT9) we measured the perceived importance of the items stated, while for the questions considering behavioural and cognitive changes (BCC), we enquired about changes in the last three years in 14 selected items in terms of an increase or decrease.

4. Sample description and data gathering

In the research a cross-cultural dimension was introduced. During September and October 2005, questionnaires were distributed to Slovenian, Croatian and Malaysian companies that had more than 50 employees.

These three countries were selected intentionally while we wanted to control for both relatively similar as well as one very distant national culture. Slovenia and Croatia are two neighbouring countries which have had a part of common history (but are still different in terms of language and economic level of development). Malaysia is different from Slovenia and Croatia in terms of language(s), history, culture, etc. while it is close to Croatia in terms of level of economic development measured by GDP per capita.

We have used Slovenian, Croatian, English and Malay version of OLIMP questionnaire. Semantic differences were minimised using pre-testing procedures (focus groups with practitioners and academics and back-and-forward translation). In the Slovenian case, 203 completed

Table 2
The examined companies according to industry type

Industry type	Croatia		Slovenia		Malaysia	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1 Agriculture	5	2.5	5	2.5	6	2.0
2 Fishing	0	0	0	0	8	2.7
3 Mining	3	1.5	2	1.0	15	5.0
4 Manufacturing	64	31.7	95	46.8	45	15.0
5 Electricity and water supply	10	5.0	3	1.5	8	2.7
6 Construction	32	15.8	21	10.3	14	4.7
7 Wholesale and retail trade	27	13.4	21	10.3	35	11.7
8 Hotels and restaurants	13	6.4	7	3.4	15	5.0
9 Transport	11	5.4	13	6.4	49	16.3
10 Financial intermediation	6	3.0	7	3.4	22	7.3
11 Renting business activities	0	0	2	1.0	11	3.7
12 Other community, social and personal service activities	26	12.4	20	9.9	72	24.0
Data not available	5	2.5	7	3.4	0	–
Total	202	–	203	–	300	–

questionnaires were returned (a 16.5% response rate), in Croatia 202 completed questionnaires were returned to the research group (an 11.5% response rate) while, in the Malaysian case, the research group received 300 completed questionnaires (a 40.3% response rate). The response rates itself reflect the differences in national cultures and the attitude of companies towards work of external experts. The questionnaires received from the companies in examined countries allow us to compare the results and implicitly test the impact of national culture as contextual variable on organisational learning phenomena.

According to the type of industry criterion, the percentage of companies is almost the same for some industry types, while the difference across the samples is biggest in manufacturing. The frequencies and percentages of companies concerning their industry type are shown in Table 2.

The selected companies were also analysed according to the number of employees' criterion. About two-thirds of the selected Slovenian and Croatian companies, and only one-third of Malaysian ones, had between 50 and 250 employees, the percentage of middle-sized companies was similar in all three countries (around 16–20%). A more significant difference is observed considering companies with 500 and more employees, which is probably because of the different population and economic structures of the countries in the sample. According to the companies' revenues in 2004, there is a slight difference between Slovenian, Croatian and Malaysian companies. Slovenian companies from the sample had higher annual revenues in 2004 than their Croatian and Malaysian counterparts.

Despite the fact that top Croatian management members were also significantly represented, the questionnaire was mostly completed by middle management respondents (directors of functional departments). In Slovenia, top and middle management were equally represented within the sample, while in Malaysia the respondents were mostly from the top management level. To better understand the sample, data concerning independent characteristics

Table 3
Independent characteristics of the companies and respondents examined

	Croatia	Slovenia	Malaysia
<i>Independent characteristics of the companies</i>			
Number of employees			
50–249	71.3%	72.4%	30.6%
250–499	16.3%	16.1%	20.7%
500+	11.8%	11.5%	48.7%
N.A.	0.5%	–	–
Annual revenue in 2004 (mil. €)			
Under 7	50.0%	37.4%	35.3%
7–27	33.7%	42.8%	54.3%
More than 27	14.4%	19.8%	10.3%
N.A.	2.0%	7.9%	–
<i>Independent characteristics of the respondents</i>			
Hierarchical position of the respondent			
Top management	22.4%	31.5%	68.3%
Middle management	55.7%	31.5%	28.9%
Lower management and operational level	13.0%	12.8%	2.7%
N.A.	8.9%	24.2%	–

of the companies and respondents are summarised in Table 3.

Since the results of the analysis show that the samples are slightly different, the differences should not have an important influence on later research results. Further, as the questionnaires used in the examined countries were the same both facts allow us to proceed with the data analysis.

5. Data analysis

5.1. Methodological framework

In order to compare the means of all variables used to measure organisational learning process among Slovenian, Croatian and Malaysian companies, we used a one-way ANOVA procedure, Levine's test for the homogeneity of

variances and post hoc tests (Bonferroni and Dunnett T3). In the appendix, we present the means and standard deviations for each of the 38 variables used. A glance at the descriptive statistics could lead us to assume that there may be many items where statistical differences occur, especially when relating the Malaysian responses to the Slovenian and Croatian ones. Using the ANOVA procedure and the Brown–Forsythe test for the equality of means we established that statistically significant differences in means exist in all but five variables: INFOACQ6, INFOACQ7, INFINT7, BCC13 and BCC14. The next step is to delve into these findings and establish the size and direction of these mean differences using a post hoc test (Bonferroni for the equality of variances assumed and Dunnett for the equality of variances not assumed). In Tables 4 and 5, we present multiple comparisons of mean differences among the three countries studied.

Looking at the information acquisition items (Table 4) we note that the largest differences are observing for INFOACQ11 and INFOACQ13. Malaysian companies more often reward employees specifically for being a source of quality information than do Croatian and Slovenian companies. They also dedicate more employees to the search for external information than is the case in Croatia and even less in Slovenia. On the contrary, Slovenian and Croatian companies rely more on past decisions when acquiring the information needed for current decision-making (INFOACQ2). Further proof that Slovenian and

Table 4
Mean differences for information acquisition variables

Dependent variable	Country I/ Country J	Mean differences (I – J)		
		Slovenia	Croatia	Malaysia
INFOACQ1	Slovenia	–	.00	.21*
	Croatia	–	–	.21*
INFOACQ2	Slovenia	–	.01	.75*
	Croatia	–	–	.74*
INFOACQ3	Slovenia	–	.00	.19
	Croatia	–	–	.19
INFOACQ4	Slovenia	–	–.10	.13
	Croatia	–	–	.23*
INFOACQ5	Slovenia	–	–.07	–.54*
	Croatia	–	–	–.47*
INFOACQ6	Slovenia	–	–.01	–.03
	Croatia	–	–	–.02
INFOACQ7	Slovenia	–	.06	–.09
	Croatia	–	–	–.15
INFOACQ8	Slovenia	–	–.49*	–.18*
	Croatia	–	–	.29*
INFOACQ9	Slovenia	–	–.33*	–.57*
	Croatia	–	–	–.24*
INFOACQ10	Slovenia	–	–.41*	–.72*
	Croatia	–	–	.41*
INFOACQ11	Slovenia	–	–.51*	–1.78*
	Croatia	–	–	1.28*
INFOACQ12	Slovenia	–	–.14	–.42*
	Croatia	–	–	–.29*
INFOACQ13	Slovenia	–	–.47*	–1.72*
	Croatia	–	–	–1.27*

* The mean difference is significant at the 0.05 level.

Table 5
Mean differences for the information interpretation variables

Dependent variable	Country I/ Country J	Mean differences (I – J)		
		Slovenia	Croatia	Malaysia
INFOINT1	Slovenia	–	.08	.41*
	Croatia	–	–	.32*
INFOINT2	Slovenia	–	.15	.23*
	Croatia	–	–	.08
INFOINT3	Slovenia	–	–.12	–.31*
	Croatia	–	–	–.19
INFOINT4	Slovenia	–	–.08	–.25*
	Croatia	–	–	–.17*
INFOINT5	Slovenia	–	.06	–.27*
	Croatia	–	–	–.33*
INFOINT6	Slovenia	–	–.13	–.29*
	Croatia	–	–	–.16
INFOINT7	Slovenia	–	–.03	–.02
	Croatia	–	–	.00
INFOINT8	Slovenia	–	.11	–.25*
	Croatia	–	–	–.36*
INFOINT9	Slovenia	–	–.64*	–1.19*
	Croatia	–	–	–.55*
INFOINT10	Slovenia	–	.16	.87*
	Croatia	–	–	.71*
INFOINT11	Slovenia	–	.18	1.01*
	Croatia	–	–	.83*

* The mean difference calculated on scale 1–5.

Croatian companies are more internal-looking is that they treat their employees as an important source of information (INFOACQ1), while Malaysian companies demonstrate their external perspective in information acquisition by more often using a clipping service (INFOACQ5), joint tasks, mergers and acquisitions (INFOACQ8), and searching for information from experts and managers outside of the company (INFOACQ10). Executives of both Croatian and Malaysian companies tend to seek advice from the Board of Directors and owners more often than do their Slovenian colleagues (INFOACQ9).

An examination of mean differences for the information interpretation items (Table 5) reveals that the managers of Slovenian, Croatian and especially Malaysian companies tend to use quite different approaches in trying to understand the meaning and context of the information they have acquired. While Slovenian and Croatian managers agree that information given to subordinates must be simple and concise (INFOINT11), Malaysian managers on average tend to disagree with them and offer more space for creativity and innovation. Malaysians more often use formal committees as decision-makers (INFOINT3) than Slovenian companies, while Slovenians more often than Malaysians use non-formalised team meetings in the same manner (INFOINT2). Another interesting distinction is that both Slovenian and Croatian managers seem to rely more on personal contacts than their Malaysian counterparts (INFINT1) who, on the other hand, rely more on formal, written communication (INFINT5) and special reports (INFINT6). Nevertheless, when using formal chain of command reporting (INFINT7) there are no statistically

Table 6
Mean differences for behavioural and cognitive changes variables

Dependent variable	Country I/ Country J	Mean differences (I – J)		
		Slovenia	Croatia	Malaysia
BCC1	Slovenia	–	–.04	.25*
	Croatia	–	–	.29*
BCC2	Slovenia	–	–.02	.58*
	Croatia	–	–	.60*
BCC3	Slovenia	–	.04	.40*
	Croatia	–	–	.36*
BCC4	Slovenia	–	–.01	.46*
	Croatia	–	–	.47*
BCC5	Slovenia	–	.00	.46*
	Croatia	–	–	.46*
BCC6	Slovenia	–	–.15	.15
	Croatia	–	–	.30*
BCC7	Slovenia	–	–.08	.29*
	Croatia	–	–	.37*
BCC8	Slovenia	–	–.23	–.06
	Croatia	–	–	.17
BCC9	Slovenia	–	–.30*	.00
	Croatia	–	–	.29*
BCC10	Slovenia	–	–.18	.11
	Croatia	–	–	.28*
BCC11	Slovenia	–	–.24*	–.04
	Croatia	–	–	.20
BCC12	Slovenia	–	–.18	–.15
	Croatia	–	–	.03
BCC13	Slovenia	–	–.16	–.09
	Croatia	–	–	–.07
BCC14	Slovenia	–	–.09	.10
	Croatia	–	–	.19

significant differences among the countries examined. When observing IT support for information interpretation, the results are somewhat mixed. Malaysian companies tend to use intranet (INFINT8) more often than companies in Slovenia and Croatia, while Slovenian companies more often use electronic forums (INFINT9) in interpreting information than in the Malaysian case, with both doing so more than Croatian companies.

When inspecting the variables for behavioural and cognitive changes (Table 6) we need to say that, even though few statistically significant mean differences do exist, they tend to be reasonably lower than those observed in the information acquisition and information interpretation variables. Slovenian and Croatian companies report slightly better results with BCC2–BCC5 and BCC7. Apparently, changes are ubiquitous and almost equally fast and profound for Slovenian, Croatian, and Malaysian companies, which is an interesting specimen of globalisation forces at work.

6. Discussion and conclusion

Organisational learning has received a lot of attention in the research community. In particular, its link towards organisational performance has been under a lot of scrutiny in recent years. While positive pattern re-emerged in practically all the samples, there is a gap in addressing

the organisational learning process as contextually dependent process. One of the particular aspects of this context is national culture.

We examined the process of organisational learning in Slovenian, Croatian and Malaysian companies in the pursuit of understanding the ways companies in different countries respond to the turbulent business environment and emerging challenges (see, e.g. Drucker, 2001). For that, we used a validated and reliable instrument tested on several occasions and in several contexts (Dimovski, 1994; Dimovski & Škerlavaj, 2005; Škerlavaj et al., 2007) and obtained interesting findings.

Obviously, there are processes of convergence and divergence evident from the data. Most of all, convergence can be spotted in that part which deals with behavioural and cognitive changes. Companies in all three countries need to change and adapt quickly and deeply in order to gain a competitive advantage. Changes are omnipresent and ubiquitous in modern business environment.

Nevertheless, patterns of organisational learning in companies also diverge among three countries studied. When trying to acquire information, which is sometimes even considered to be a ‘fuel for modern businesses’, Slovenian and Croatian companies more often use internal sources (such as previous decisions and own employees). On the other hand, Malaysian companies rely deeply on external sources (for instance they reward employees for being source of good information, dedicate employees to searching for external information, make use of clipping services, decide to go into mergers and acquisitions and joint tasks with the intention of learning something new, employ external experts and talk to managers outside of the company).

Another important issue is that, when trying to understand the meaning of the information acquired, very divergent patterns are evolving. Again, there is a duality between Malaysian on one hand and Slovenian and Croatian managers on the other. Interestingly, Malaysian companies tend to use more formal channels (written memos, committees, special reports, etc.), while Slovenian and Croatian managers more often use personal contacts and informal team meetings when trying to understand the meaning of the information they have acquired.

Our findings hold some important implications for managers as well as academics. Above all, we need to consider organisational learning as a contextually dependent variable. In this particular case, the national cultural environment is implied as the contextual variable. We hope to have demonstrated an initial step in the empirical understanding of the organisational learning process in different cultural contexts, which is undoubtedly an important contribution of the paper and fills an existing gap in the literature. Future research should take an even broader scope (include more countries) and be oriented at determining clusters considering specific cultures or country groups. In this manner different approaches to the management of the organisational learning process within e.g. multina-

tional companies could be established. Besides, the impact of the organisational learning process on organisational performance in various national settings simultaneously should be examined. The positive effect established in one-country research needs to be tested in a cross-cultural settings by using rigorous statistical methods such as multi-group structural equation modelling. In addition, the next step is to scrutinise in depth and to examine the organisational learning process in several case studies, on an individual, group and organisational, as well as relational level by using for instance the social network analysis approach to organisational learning (Škerlavaj & Dimovski, 2006). Such an approach is also trend in knowledge management field (Liebowitz, 2005). This contribution is an initial step in the exploration of organisational learning phenomena in cross-cultural settings, which offers a lot of challenging research opportunities in the years to come.

References

- Argyris, C., & Schön, D. A. (1978). *Organisational learning: A theory of action perspective*. Reading, MA: Addison-Wesley.
- Bontis, H., Crossan, M., & Hulland, J. (2002). Managing an organizational learning system by aligning stocks and flows. *Journal of Management Studies*, 39(4), 437–469.
- Daft, R. L., & Lengel, R. H. (1986). Organisational information requirements, media richness and structural design. *Management Science*, 32(5), 554–571.
- Daft, R. L., & Weick, K. E. (1984). Toward a model of organisations as interpretation systems. *The Academy of Management Review*, 9(2), 284–295.
- De Geus, A. P. (1988). Planning as learning. *Harvard Business Review*, 88(2), 70–74.
- Dimovski, V. (1994). Organisational learning and competitive advantage. PhD Thesis. Cleveland, Ohio.
- Dimovski, V., & Škerlavaj, M. (2005). Performance effects of organisational learning in a transitional economy. *Problems and Perspectives in Management*, 3(4), 56–67.
- Dodgson, M. (1993). Organizational learning – A review of some literatures. *Organization Studies*, 14(3), 375–394.
- Drucker, P. (2001). *Management challenges for the 21st century*. Harper Collins Publishers.
- Easterby-Smith, M., & Lyles, M. (2003). Introduction – The watersheds of organizational learning and knowledge management. In M. E.-S. M. Lyles (Ed.), *Handbook of organizational learning and knowledge management*. Oxford: Blackwell Publishing.
- Fiol, C. M., & Lyles, M. A. (1985). Organisational learning. *Academy of Management Review*, 10(4), 803–813.
- Garvin, D. (1993). Building a learning organization. *Harvard Business Review*, 71(4), 78–91.
- Huber, G. P. (1991). Organisational learning: The contributing process and the literatures. *Organisation Science*, 2(1), 88–115.
- Jimenez-Jimenez, D., & Cegarra-Navarro, J. G. (2007). The performance effects of organizational learning and market orientation. *Industrial Marketing Management*, 36(6), 694–708.
- Jones, G. R. (2000). *Organisational theory* (3rd ed.). New York: Prentice-Hall.
- Martello, W. E. (1993). Scripts as practical tool for strategic action. In *Proceedings of 13th annual international conference*. Chicago, IL: Strategic Management Society.
- Liebowitz, J. (1999). *The knowledge management handbook*. Boca Raton, FL: CRC Press.
- Liebowitz, J. (2000). *Building organizational intelligence: A knowledge management primer*. Boca Raton, FL: CRC Press.
- Liebowitz, J. (2001). Knowledge management and its link to artificial intelligence. *Expert Systems with Applications*, 20(1), 1–6.
- Liebowitz, J. (2005). Linking social network analysis with the analytic hierarchy process for knowledge mapping in organizations. *Journal of Knowledge Management*, 9(1), 76–86.
- Liebowitz, J., & Beckman, T. (1998). *Knowledge organizations: What every manager should know*. Boca Raton, FL: CRC Press.
- Sanchez, R. (2005). Knowledge management and organisational learning – Fundamental concepts for theory and practice. Lund Institute for Economic Research, Working Paper Series, 2005/3.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of learning organisation*. New York: Currency Doubleday.
- Shrivastava, P. (1983). A typology of organisational learning systems. *Journal of Management Studies*, 20(1), 1–28.
- Spector, J. M., & Davidsen, P. I. (2006). How can organizational learning be modeled and measured? *Evaluation and Program Planning*, 29, 63–69.
- Škerlavaj, M., & Dimovski, V. (2006). Social network approach to organizational learning. *The Journal of Applied Business Research*, 22(2), 89–98.
- Škerlavaj, M., Indihar Štemberger, M., Škrinjar, R., & Dimovski, V. (2007). Organizational learning culture – the missing link between business process change and organizational performance. *International Journal of Production Economics*, 106(2), 346–367.
- Tsang, E. W. K. (1997). Organizational learning and the learning organization – A dichotomy between descriptive and prescriptive research. *Human Relations*, 50(1), 73–89.
- Weick, K. E., & Daft, R. L. (1984). The effectiveness of interpretation systems. In K. S. C. D. A. Whetten (Ed.), *Organizational effectiveness: A comparison of multiple models* (pp. 70–93). Orlando, FL: Academic Press.
- Zahra, S. A., & Covin, J. G. (1993). Business strategy, technology policy and firm performance. *Strategic Management Journal*, 14(6), 451–478.