

# Innovations and Lifelong Learning in Sustainable Organization

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Innovation and knowledge are two of key factors for sustainable development of company or organization. Particularly in the current period of economic crisis it is crucial to promote lifelong learning and creativity to contribute innovative solutions to various problems. Lifelong learning makes a significant contribution to awareness of the importance of innovation and creativity for sustainable development of organization. In this paper we explore if respondents from Slovenian companies think that innovation and lifelong learning is important for sustainable development of company. Presented are the results of a survey conducted in 67 large and medium-sized enterprises in Slovenia where we upon respondents' judgment examine the correlation between the innovativeness level and lifelong learning, investing in innovativeness and competitive advantage and the promotion of lifelong learning and competitive advantage of the organization. Also the answers to the questions if lifelong learning contributes to the sustainable development of organization and if more the organization takes care of sustainable development the bigger is its competitive advantage before equal bidders are given.

**Keywords:** innovations, lifelong learning, sustainable organization

## 1. Introduction

Innovations and knowledge are very important factors for sustainable development of a company or an organization, particularly in the current period of economic crisis. Also the European Union (EU) encourages the "knowledge based economy" and it is announced the year 2009 as the European Year of Creativity and Innovation. The broad objectives ELUI 2009 is to support the efforts of Member States to promote creativity through lifelong learning. Creativity is recognized as a driving force for innovativeness and a key factor in socio economic development (Odločba št. 1350/2008/ES Evropskega parlamenta in Sveta). It is interesting coincidence the year 2009 was also a year of exceptional economic crisis and recession. This coincidence can be informative and lead us to thought that the creativity, knowledge and innovations may be the answer to the crisis.

Innovations and lifelong learning are important factors in achieving a sustainable development of an organization. Employees are required not only to be more educated about their company's business, but also to handle specific work tasks, while intensity of work and time limits are escalating. In this changing world the value systems are changing and the company intellectual capital must be organized carefully to become flexible and adoptive to changes and specifically

to increase the inventive capability (Kjellberg and Werneman, 2000).

In this article we will research the opinion of respondents' from middle and large organizations in Slovenia about how important innovations and lifelong learning are for organization and how much organization invest in learning and innovations. Upon respondents' assessment we will try to find out (i) if there is a positive correlation between the innovativeness level and lifelong learning developing level in the organization, (ii) if lifelong learning contributes to the sustainable development of the organization, (iii) if there is a positive correlation between investing in innovativeness and competitive advantage of the organization, (iv) if there is a positive correlation between the promotion of lifelong learning of employees and competitive advantage of the organization and (v) if the more the organization takes care of sustainable development the bigger is the organization's competitive advantage before equal bidders.

## 2. Theoretical background

### 2.1 Sustainable organization

Van Kleef and Roome (2007) defined sustainable development as "a process of change in which the exploitation of resources,

direction of investments, orientation of technological development, and institutional change are made consistent with future as well as present needs". With the other words, the goal of sustainable development is to integrate the economic, social and ecological impacts of our patterns of production and consumption into forms of development that are designed for long-term sustainability (Van Kleef and Roome, 2007).

Mog (2004) stresses that sustainability is an inherently dynamic undefined and challenge concept. Sustainable development must, therefore, be seen as an unending process - defined not by fixed goals or the specific means of achieving them, but by an approach to creating change through continuous learning and adaptation.

Much work on advancing sustainable development has focused on the role of technology, but human factor is also very important factor for sustainable organization. There is growing agreement that it is not technology so much important as patterns of human activity that are challenging the sustainability of human development (Parrish, 2007). Sustainable structures are required for organizations working with temporary team structures. To meet the customer demands and changes in environment new team constellations are continuously required. Moreover, organizations designed on customer demands are more likely to achieve successful results (Kjellberg and Werneman, 2000). Change in the pursuit of sustainability can be achieved through learning, rationality, alignment, motivation and empowerment (Lozano, 2007).

## 2.2 Innovations

Innovation is seen as the process of discovery and development that creates new products, production processes, organizations, technologies, institutional and systemic arrangements (Van Kleef and Roome, 2007). Kuczmarski (2003) describes innovation as a mindset, an attitude, a feeling, an emotional state, a set of values, a commitment to newness. Some researchers stress out that the perception of innovation often can be subjective (Haggman, 2009; McAdam, 2005).

Different authors (Song et al., 1999; McFadzen et al., 2005; Oke, 2007) distinguish different types of innovations: incremental, radical, technological, process, product, organizational, operational, managerial, social, or institutional. Understanding innovations processes make it necessary to take account of all the important factors that impact innovations. Mitra (2000) argues that innovation is often a result of interaction of various subjects, technologies, people and organizations, and that the learning that is derived from such as interaction supports innovative activity. Massa and Testa (2008) argue that there are different perspectives relating to innovation by three main innovation stakeholders: entrepreneurs, academics and policy makers. Companies strengthen their competence to innovate by developing the capabilities of employees within the organization (Van Kleef and Roome, 2007).

Sheridan (2009) claims that the difference with innovation projects is that they are meant to be disruptive rather than incremental. Creating a disruptive technology requires a new level of thinking about the problem and the solution and thus challenges everyone on the team to step outside of standard approaches and invent something new. Sahlberg (2009) stress-

es out that the innovativeness is the extraction of economic and social value from knowledge. It involves putting ideas, knowledge and technology to work in a manner that brings about a significant improvement in performance. Innovations require fundamentally different attitudes, knowledge and skills from the citizens.

Many authors argue that innovation is directly or indirectly linked to achieving sustainable competitive advantage of the organization (Cottam et al., 2001; Kuczmarski, 2003; Humphreys et al., 2005; Denton, 1999; Dimovski and Penger, 2008; Bastič and Leskovar-Špacapan, 2006; Johannessen and Olsen, 2009; Liao and Price, 2010; Miller et al., 2008). Innovations are important factor to increase business. The strengthening of innovativeness among employees is one of the most fundamental competitive strength.

As Liao and Price (2010) claim firm investments in innovations have a statistically significant effect on company's performance, but only when supported by change oriented environment and organizational culture, not by it selves. Also, the state shall promote the innovation processes in organizations that produce higher quality products and at the same time reduce costs of production. In addition to innovation in production, developing new products and technologies, innovation should not be ignored in all other areas as human resources and marketing, and also throughout the management-organizational field. This contributes to greater operational efficiency at the onset of vigorous enforcement, business and market as a whole (Fink Babič, 2006).

The European Innovation Scoreboard (EIS) provides a comparative assessment of the innovation performance of EU Member States, under the EU Lisbon Strategy. In general EU is making overall progress, with strong increases in the numbers of graduates in science, engineering, social sciences and humanities, both at first degree and graduate level. Other areas of strong increase are in broadband and in venture capital investments, although the statistics do not yet capture the impact of the economic downturn in 2008 (European Innovation Scoreboard, 2008).

Based on their innovation performance across 29 indicators, EU Member States fall into the following four country groups. First group (Sweden, Finland, Germany, Denmark and the UK) are the Innovation leaders, with innovation performance well above that of the EU average and all other countries. Second group (Austria, Ireland, Luxembourg, Belgium, France and the Netherlands) are the Innovation followers, with innovation performance below those of the innovation leaders but above that the EU average. Slovenia is in third (of four) group called Moderate Innovators. These are countries whose innovation indicators are significantly below the European average, but their growth rate of innovations is greater than average in the EU25. In this group are beside Slovenia also Cyprus, Estonia, Spain, Portugal, Greece and Italy. The trend in Cyprus' innovation performance is well above the average for this group, followed by Portugal, while Spain and Italy are not improving their relative position. The average innovation growth for this group is 3,6%. The last group (Malta, Hungary, Slovakia, Poland, Lithuania, Romania, Latvia and Bulgaria) are Catching-up countries with innovation performance well

below the EU average (European Innovation Scoreboard, 2008).

The evolution of innovations in Slovenia is positive for all indicators, which means that innovativeness is increasing but is still far from satisfactory. Moreover, the number of graduates in scientific and technical disciplines is not increasing, which may have negatively impact on innovativeness. Companies' invest in science and research is growing slowly (Stres, Trobec and Podobnik, 2009).

Slovenia has the potential of innovations, but we cannot yet talk about a culture of creative and innovative organizations in Slovenia (Fink Babič, 2006; Bastič and Leskovar-Špacapan, 2006). Moreover, the link between research institutions and industry is very weak. But nevertheless, we made a step forward during the last few years because the awareness of government departments on the problem is growing. A vision of Slovenia as an innovative and enterprising company has been created in Slovenia's development strategy (Šušteršič, Rojec and Korenika, 2005). This should develop Slovenian's competitive advantages based on high added value, quality, the technological development and entrepreneurship.

### 2.3 Lifelong learning

Today's world is changing quickly and institutions as well as individuals are required to be flexible and to adjust the changes as quick as possible. The necessity to manage the rapid changes in science and technology as well as economic and social development in the 21st century and the necessity to adjust to the prerequisites of the knowledge society brought out the need for lifelong learning. With the purpose of remaining pace with this stunning change, it is essential to bring learners in a series of information and some skills as well (Demirel, 2009). Companies need to be competitive on the market to win a market share, and the best way to achieve that is knowledge. "In the twenty-first century those individuals who do not practice lifelong learning will not find work; those organizations which do not become learning organizations will not survive" (Global conference on lifelong learning, 1994).

Demirel (2009) defines lifelong learning as a continuous process in which individuals retain and develop their life-based conduct, knowledge and skills. The main aim of lifelong learning is to strengthen and improve the life quality of individuals by enabling them to bring their own potential to the greatest level. Lozano (2007) claims that learning in organizations takes place mutually among individuals and the groups to which they belong, i.e. as individuals start to learn, the group they belong to starts to learn, likewise learning occurs among the groups and the organization. It is important to note that learning should take place on each level, i.e. individuals should learn as individuals, but also in an inter-level manner, learn as and through groups and the organization.

The opportunity for learning is an important parameter for definition of 'good work'. Human beings have a basic need to learn new things continuously and to be able to appreciate their situation. Temporary team structures working in an environment of changing technology in a sustainable work organization is one parameter which provides knowledge and competence development (Kjellberg and Werneman, 2000).

Typically formal continues professional development and lifelong learning can take any of the following formats: training courses, both internal and external, post-graduate academic studies such as diplomas and masters, attending appropriate technical lectures, as typically organized by professional institutions, significant involvement in the work of a learned institution, e.g. presentation of a technical paper or the preparation of a report, participation in technical conferences or study visits, special exam leave (Wall and Ahmed, 2008). Pfeffer (1995) stresses out that an integral part of most new work systems is a greater commitment to training and skill development. That means that training will produce positive returns only if the trained workers are then permitted to employ their skills.

Knowledge plays a key role in increasing human capital, which is one of the main drivers of economic progress and sustainable development in knowledge societies (Sahlberg, 2009). Slater and Narver (1995) argue that learning increases competitive advantage and stimulates interest in developing organizations that foster and promote learning. Knowledge has become the main value driver for modern organizations or with the other words, that in today's highly competitive knowledge-based world, investments in knowledge are crucial to organizations (Wu at al., 2007).

MacKinnon at al. (2002) argue that the focus on learning has drawn attention to a number of important aspects of contemporary regional development processes. They stress that it is noticed shift towards a 'knowledge-driven economy', and they identify the capacity of regions to support of processes of learning and innovativeness as a key source of competitive advantage. Lam (2002) argues that implicit knowledge, which is difficult to create and transfer in the absence of social interaction and labor mobility, constitutes a most important source of learning and sustainable competitive advantage in an increasingly globalised knowledge-based economy. Knowledge is the key factor for enabling innovativeness, improving productivity and increasing competitiveness of the economy (Fink Babič, 2006). Managing the human capabilities is crucial for creative development, and thus for business innovations (Kjellberg and Werneman, 2000).

The challenges of the emerging knowledge economy, globalization and competitiveness require innovative responses on the all level of organizations and society as a whole (Jucevičienė and Cesevičiūtė, 2009). Creativity and readiness to work with innovations can be enhanced through lifelong learning when learners are encouraged to change their daily routines, experience changes in the environments in which their learning takes place, and are enabled to find their natural talent (Sahlberg, 2009).

## 3. Methodology

### 3.1 Hypotheses

Through the research we wanted to test next hypothesis:

H1: There is a positive correlation between the innovativeness level and lifelong learning development level in the organization.

- H2: Lifelong learning contributes to the sustainable development of the organization.
- H3: There is positive correlation between investing in innovativeness and competitive advantage of the organization.
- H4: There is a positive correlation between the investment in lifelong learning of employees and competitive advantage of the organization.
- H5: The more the organization takes care of sustainable development the bigger is the organization's competitive advantage before equal bidders.

### 3.2 Instrument

We tested the hypothesis through an e-questionnaire. The questionnaire comprised 18 questions relating to (1) data on the respondent (age, sex, education, function, and years of employment), (2) data on the company (branch, size, number of employees) and (3) factors relating to lifelong learning and innovations. The questionnaire was of the closed type and anonymous.

Relating to the lifelong learning and innovativeness next statements were offered:

- S1 - The organization takes care of sustainable development
- S2 - The organization has a high innovativeness level
- S3 - The organization invests in innovativeness
- S4 - The organization suitably supports/rewards innovativeness of their employees
- S5 - Innovativeness is important for the sustainable development of the organization
- S6 - The organization ascribes high importance to the lifelong learning

- S7 - The organization invests in lifelong learning
- S8 - Lifelong learning contributes to the sustainable development of the organization
- S9 - The organization's development of lifelong learning is good
- S10 - The organization has competitive advantage before equal bidders

### 3.3 Sample

The e-survey was carried out in year 2010. We have sent the questionnaire to 400 middle sized and large enterprises in Slovenia. Sampling was random. We have received 67 complete responses. The response rate was 16.75%. The questionnaire was addressed on the head of HR department or manager of the organization.

The sample consisted of 43 (64%) middle sized and 24 (36%) large organizations (n=67). Where 23 (34%) were production companies, 34 (51%) service and 9 (13%) sales companies.

For questions 9 to 18 the Cronbach's alpha coefficient was calculated. The value was 0.910 which indicates great reliability of measurement. With regard to the composition and characteristics of the sample, we believe that it is representative.

### 3.4 Results

The first statement referred to the concern of sustainable development. From Table 1 can be seen that only 7,5 % of the respondents do not think that their organizations takes care of sustainable development.

Table 1: The organization takes care of sustainable development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I absolutely disagree	1	1,5	1,5	1,5
	I do not agree	4	6,0	6,0	7,5
	I partly agree	14	20,9	20,9	28,4
	I agree	23	34,3	34,3	62,7
	I absolutely agree	25	37,3	37,3	100,0
	Total	67	100,0	100,0	

Table 2: The organization has a high innovativeness level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I absolutely disagree	3	4,5	4,5	4,5
	I do not agree	7	10,4	10,4	14,9
	I partly agree	26	38,8	38,8	53,7
	I agree	18	26,9	26,9	80,6
	I absolutely agree	13	19,4	19,4	100,0
	Total	67	100,0	100,0	

Table 3: The organization invest in innovativeness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I absolutely disagree	2	3,0	3,0	3,0
	I do not agree	10	14,9	14,9	17,9
	I partly agree	23	34,3	34,3	52,2
	I agree	16	23,9	23,9	76,1
	I absolutely agree	16	23,9	23,9	100,0
	Total	67	100,0	100,0	

Table 4: The organization ascribes high importance to the lifelong learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I absolutely disagree	3	4,5	4,5	4,5
	I do not agree	8	11,9	11,9	16,4
	I partly agree	12	17,9	17,9	34,3
	I agree	21	31,3	31,3	65,7
	I absolutely agree	23	34,3	34,3	100,0
	Total	67	100,0	100,0	

The second statement referred to the innovativeness level of the organization. In Table 2 can be seen that almost 15% of the respondent do not think that their organization has a high innovativeness level. 38,8% partly agree with the statement that their organization has a high innovativeness level and 46,4% agree or absolutely agree.

The third statement referred to the organization investments in innovativeness. Almost 18% of the respondents do not think that their organization invests enough in innovativeness. 34,3% partly agree with the statement that their organization invests enough in innovativeness and 47,8% agree or absolutely agree. 31,3% of respondents disagree with the statement that their organization suitably supports/rewards innovativeness of their employees. The same percentage partly agrees and 37,3% agree or absolutely agree. Almost all respondents (92,6%) think that innovativeness is important for the sustainable development of the organization.

The sixth statement referred to the importance that the organization ascribes to the lifelong learning. In Table 4 can be seen that 16,4% of the respondents disagree with the statement that their organization ascribes high importance to the lifelong learning. 17,9% partly agree and 65,6% agree or absolutely agree.

Only 13,4% of the respondents think that their organization does not invest in lifelong learning. 25,4% partly agree and 61,2% agree or absolutely agree.

In our research we assumed that lifelong learning contributes to the sustainable development of the organization (H2). Almost all of the respondents (95,5%) think that lifelong learning contributes to the sustainable development of the organization (Table 4). But 25,4% of the respondents think

that the organization's development of life learning is not good. The other entire think it is.

The last statement was that the organization has competitive advantage before equal bidders. In Table 6 can be seen that only 9% of the respondents do not agree with the last statement. All the others partly agree (19,4%), agree (40,3%) or absolutely agree 31,3%.

In our research we assumed (H1) that there is a positive correlation between the innovativeness level (S2) and lifelong learning development level in the organization (S9). We tested the hypothesis with Spearman's rho correlation coefficient and confirmed the correlation at the 0,01 level ( $r=0,372$ ) (Table 7).

In the third hypothesis (H3) we assumed that there is positive correlation between investing in innovativeness (S3) and competitive advantage of the organization (S10). Spearman's rho correlation coefficient confirmed the correlation at the 0,01 level ( $r=0,363$ ) (Table 8).

In the fourth hypothesis (H4) we assumed that there is positive correlation between the investment in lifelong learning of employees (S7) and competitive advantage of the organization (S10). Spearman's rho correlation coefficient confirmed the correlation at the 0,01 level ( $r=0,420$ ) (Table 9).

In the last hypothesis (H5) we assumed that the more the organization takes care of sustainable development (S1) the bigger is the organization's competitive advantage before equal bidders (S10). Spearman's rho correlation coefficient confirmed the correlation at the 0,01 level ( $r=0,536$ ) (Table 10).

By the "innovativeness" factors 17,4% of the variance of the dependent variable "The organization has competitive advantage before equal bidders" can be explained (Table 11). The most important factor is that the organization is aware of

Table 5: Lifelong learning contributes to the sustainable development of the organization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I do not agree	3	4,5	4,5	4,5
	I partly agree	7	10,4	10,4	14,9
	I agree	22	32,8	32,8	47,8
	I absolutely agree	35	52,2	52,2	100,0
	Total	67	100,0	100,0	

Table 6: The organization has competitive advantage before equal bidders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I do not agree	6	9,0	9,0	9,0
	I partly agree	13	19,4	19,4	28,4
	I agree	27	40,3	40,3	68,7
	I absolutely agree	21	31,3	31,3	100,0
	Total	67	100,0	100,0	

Table 7: The Spearman's rho for hypothesis one (n=67)

		The organization has a high innovativeness level	The organization's development of lifelong learning is good
The organization has a high innovativeness level	Correlation Coefficient	1,000	,372**
	Sig. (2-tailed)	.	,002
	N	67	67
The organization's development of lifelong learning is good	Correlation Coefficient	,372**	1,000
	Sig. (2-tailed)	,002	.
	N	67	67

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 8: The Spearman's rho for hypothesis three (n=67)

		The organization invest in innovativeness	The organization has competitive advantage
The organization invest in innovativeness	Correlation Coefficient	1,000	,363**
	Sig. (2-tailed)	.	,003
	N	67	67
The organization has competitive advantage before equal bidders	Correlation Coefficient	,363**	1,000
	Sig. (2-tailed)	,003	.
	N	67	67

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 9: The Spearman's rho for hypothesis four (n=67)

		The organization has competitive advantage	The organization invest in lifelong learning
The organization has competitive advantage before equal bidders	Correlation Coefficient	1,000	,420**
	Sig. (2-tailed)	.	,000
	N	67	67
The organization invest in lifelong learning	Correlation Coefficient	,420**	1,000
	Sig. (2-tailed)	,000	.
	N	67	67

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

Table 10: The Spearman's rho for hypothesis five (n=67)

		The organization has competitive advantage	The organization takes care of sustainable development
The organization has competitive advantage before equal bidders	Correlation Coefficient	1,000	,536**
	Sig. (2-tailed)	.	,000
	N	67	67
The organization takes care of sustainable development	Correlation Coefficient	,536**	1,000
	Sig. (2-tailed)	,000	.
	N	67	67

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

Table 11: Regression analysis for the dependent variable "The organization has competitive advantage before equal bidders" and independent variables presenting "inventiveness" (n=67)

R=0,473; R<sup>2</sup>=0,224; Adjusted R<sup>2</sup>=0,174, CI OR=95%

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,089	,489		4,271	,000
The organization has a high inventiveness level	,179	,200	,203	,894	,375
The organization invests in inventiveness	-,063	,217	-,074	-,289	,774
The organization suitably supports/rewards inventiveness	,159	,130	,207	1,224	,226
Inventiveness is important for the sustainable development of the organization	,219	,136	,228	1,603	,114

*Dependent Variable: The organization has competitive advantage before equal bidders*

the importance of the sustainable development for the organization ( $\hat{\alpha}=0,228$ ).

By the "lifelong learning" factors 23,1% of the variance of the dependent variable "The organization has competitive

advantage before equal bidders" can be explained (Table 12). The respondents think that the most important role by the competitive advantage of the organization plays their good development of lifelong learning ( $\hat{\alpha}=0,342$ ).

Table 12: Regression analysis for the dependent variable "The organization has competitive advantage before equal bidders" and independent variables presenting "lifelong learning" (n=67)

R=0,527; R<sup>2</sup>=0,278; Adjusted R<sup>2</sup>=0,231, CI OR=95%

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,121	,575		3,688	,000
The organization ascribes high importance to the lifelong learning	,189	,163	,238	1,160	,251
The organization invests in lifelong learning	-,072	,213	-,082	-,338	,736
Lifelong learning contributes to the sustainable development of the organization	,106	,138	,095	,766	,446
The organization's development of lifelong learning is good	,277	,182	,342	1,521	,133

Dependent Variable: The organization has competitive advantage before equal bidders

## 4 Discussion

Many researchers have studied and write about innovations and lifelong learning and what role they play in achieving and maintaining organization's sustainable development as well as how they contribute to the competitive advantage of the organization. Based on the reviewed literature and results from our research in Slovenian middle and large sized organizations we can conclude that organizations ascribe that innovations and lifelong learning positively impact organization's sustainable development and play an important role in its competitive advantage before equal bidders.

Data collected from the sample of 67 Slovenian middle and large sized organizations confirmed all five researched hypotheses set up based on reviewed literature. The research based on respondents' judgment shows that lifelong learning and investment in innovations are positively correlated. Results of our research also show that respondents believe that organizations with high innovativeness level invest in innovativeness, suitably support/reward innovativeness of their employees and find that innovativeness is important for the sustainable development of the organization. Organizations that have a good developed lifelong learning ascribe high importance to the lifelong learning of their employees, invest in lifelong learning and think that lifelong learning contributes to the sustainable development of the organization.

Research confirms that respondents believe that investment in innovation and promoting innovativeness of organization's employees contributes to the sustainable development of the organization. Further, they believe that also knowledge and lifelong learning are a key factor that contributes to the high level of innovativeness and organizations development. That is an important suggestion for managers struggling for success, particularly in time of economic crisis. This means that they should, despite of the tendency to reduce costs, part of financial resources invest in employees' education and stimulate innovations. Investing in innovations and promote innovations of employees have proved to be a successful way

to achieve good performance of the organization and improve its position in the market.

Our study is based on judgment of the respondents from middle sized and large organizations in Slovenia.

## 5 Conclusion

The knowledge based economy, globalization and competitiveness bring new challenges that call for innovative responses in organizations and in society as a whole. The transformations taking place in all societies require an increasing participation of the individual, an ability to innovate and solve problems, a capacity to learn and opportunity to go on learning. Awareness of the significance of lifelong learning and innovations is growing everywhere. One of the important factors for company sustainability and development are employees, who use their knowledge and have innovative ideas. But employees need to be inspired and supported by their managers and therefore company need to create an appropriate environment to develop people's innovative thinking and willing to learn.

Knowledge is the key factor enabling innovations, improving productivity and increasing competitiveness of the economy or with the other words, only new ideas and knowledge can contribute to the development of the organizations as well as of the economy.

## References

- Bastič, M. & Leskovar-Špacapan, G. (2006). What do transition organizations lack to be innovative? *Kybernetes*, 35(7/8): 972-992, DOI: 10.1108/03684920610675030.
- Cottam, A., Ensor, J. & Band, C. (2001). A benchmark study of strategic commitment to innovation, *European Journal of Innovation Management*, 4(2): 88-94, DOI 10.1108/14601060110390594.
- Demirel, M. (2009). World Conference on Educational Sciences 2009, Lifelong learning and schools in the twenty-first century, *Procedia Social and Behavioral Sciences*, 1(1): 1709-1716, DOI: 10.1016/j.sbspro.2009.01.303.



- Denton, K. (1999). Gaining competitiveness through innovation, *European Journal of Innovation Management*, 2(2):82-85, DOI: 10.1108/14601069910269790.
- Dimovski, V. & Penger, S. (2008). *Temelji managementa*, Harlow (Essex): Pearson Education, pp. 173.
- European Innovation Scoreboard 2008: *Comparative analysis of innovation performance*. Available at [http://www.proinnoeurope.eu/node/admin/uploaded\\_documents/EIS2008\\_Final\\_report-pv.pdf](http://www.proinnoeurope.eu/node/admin/uploaded_documents/EIS2008_Final_report-pv.pdf) [January, 2010].
- Fink Babič, S. (2006). Vloga inovativnosti pri trajnostnem razvoju [The role of Inovativeness in sustainable development], *Organizacija*, 39(5): 314-320.
- Haggman, S.K. (2009). Functional actors and perceptions of innovation attributes: influence on innovation adoption, *European Journal of Innovation Management*, 12 (3): 386-407, DOI: 10.1108/14601060910974246.
- Humphreys, P., McAdam, R. & Leckrey, J. (2005). Longitudinal evaluation of innovation implementation in SMEs, *European Journal of Innovation Management*, 2005, 8(3): 282-304, DOI 10.1108/14601060510610162.
- Johannessen, J. & Olsen, B. (2009). Systemic knowledge processes, innovation and sustainable competitive advantages, *Kybernetes*, 38(3/4): 559-580, DOI 10.1108/03684920910944795.
- Jucevičienė, P. & Cesevičiūtė, I. (2009). Characteristics of Educational and Learning Environments in Organization and Partnership Network from Innovation Point of View, *Social Sciences/ Socialiniai mokslai*, 63(1).
- Kjellberg, A. & Werneman A. (2000). Business Innovation - Innovative Teams, Competence Brokers and Beehive Structures - in a Sustainable Work Organisation, *Annals of the CIRP*, 49(1).
- Kuczmariski, T. (2003). What is innovation? And why aren't companies doing more of it? *Journal of Consumer Marketing*, 20(6): 536-541, DOI: 10.1108/07363760310499110.
- Lam, A. (2002). Alternative societal models of learning and innovation in the knowledge economy. DRUID Summer Conference on Industrial Dynamics of the New and Old Economy - who is embracing whom? Copenhagen/Elsinore 6-8 June 2002, DOI: 10.1111/1468-2451.00360.
- Liao, T. & Price, J. (2010). Innovation investments, market engagement and financial performance: A study among Australian manufacturing SMEs, *Research Policy*, 39(1): 117-125, DOI: 10.1016/j.respol.2009.11.002.
- Lozano, R. (2007). Developing collaborative and sustainable organizations, *Journal of Cleaner Production*, 16: 499-509, DOI: 10.1016/j.jclepro.2007.01.002.
- MacKinnon, D., Cumbers, A. & Chapman, K. (2002). Learning, innovation and regional development: a critical appraisal of recent debates, *Progress in Human Geography*, 26(3): 293-311, DOI: 10.1191/0309132502ph371ra.
- Massa, S. & Testa, S. (2008). Innovation and SMEs: Misaligned perspectives and goals among entrepreneurs, academics, and policy makers, *Technovation*, 28(7): 393-407, DOI: 10.1016/j.technovation.2008.01.002.
- McAdam, R. (2005). A multi-level theory of innovation implementation: Normative evaluation, legitimisation and conflict, *European Journal of Innovation Management*, 8(3): 373-388, DOI: 10.1108/14601060510610216.
- McFadzean, E., O'Loughlin, A. & Shaw, E. (2005). Corporate entrepreneurship and innovation part 1: the missing link, *European Journal of Innovation Management*, 8(3): 350-372, DOI: 10.1108/14601060510610207.
- Miller, D., Le Breton Miller, I. & Scholnick, B. (2008). Stewardship vs. stagnation: an empirical comparison of small family and non-family businesses, *Journal of Management Studies*, 45(1): 51-78, DOI: 10.1111/j.1467-6486.2007.00718.x.
- Mitra, J. (2000). Making connections: Innovation and collective learning in small businesses, *Education + Training*, 42(4/5): 228-236, DOI: 10.1108/00400910010373679.
- Mog, J. M. (2004). Struggling with Sustainability-A Comparative Framework for Evaluating Sustainable Development Programs, *World Development*, 32(12): 2139-2160, DOI: 10.1016/j.worlddev.2004.07.002.
- Oke, A. (2007). Innovation types and innovation management practices in service companies, *International Journal of Operations & Production Management*, 7(6): 564-587, DOI: 10.1108/01443570710750268.
- Parrish, B. D. (2007). Designing the sustainable enterprise, *Futures* 39: 846-860. DOI:10.1016/j.futures.2006.12.007.
- Pfeffer, J. (1995). Producing Sustainable Competitive Advantage Through The Effective Management Of People, *Academy of Management Executive*, 9(1): 55-69.
- Sahlberg, P. 2009. Creativity and innovation through lifelong learning. *Journal of Lifelong Learning in Europe*, 14(1): 53-60.
- Sheridan, R. (2009). Agile, Innovation, and the Project Manager, The PMI Global Congress 2009 - North America, Orlando, Florida, USA 10-13th October 2009.
- Slater, S. F. & Narver, J.C. (1995). Market Orientation and the Learning organization. *Journal of Marketing*, 59(3): 63-74.
- Song, M., Di Benedetto, A. & Zhao Y. (1999). Pioneering advantages in manufacturing and service industries: empirical evidence from nine countries, *Strategic Management Journal*, 20(9): 811-836, DOI: 10.1002/(SICI)1097-0266(199909)20:9<791::AID-SMJ49>3.0.CO;2-U.
- Stres, Š., Trobec, M. & Podobnik, F. (2009). Raziskava o stanju inovacijske dejavnosti v Sloveniji s predlogom aktivnih ukrepov za spodbujanje konkurenčnosti in inovativnosti v slovenskem gospodarstvu [Research on innovation activity in Slovenia with the proposal of active measures to promote competitiveness and innovation in the Slovenian economy], Ljubljana: Javna agencija RS za podjetništvo in tuje investicije.
- Šušteršič, J., Rojec M. & Korenika, K. (2005). Strategija razvoja Slovenije [Development Strategy of Slovenia], Ljubljana, Urad Republike Slovenije za makroekonomske analize in razvoj.
- Uradni list Evropske unije, ODLOČBA št. 1350/2008/ES EVROPSKEGA PARLAMENTA IN SVETA, z dne 16. decembra 2008, o Evropskem letu ustvarjalnosti in inovacij (2009). [Official Journal of the European Union, Decision no. 1350/2008/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008, the European Year of Creativity and Innovation (2009)].
- Van Kleef, J.A.G. & Roome, N.J. (2007). Developing capabilities and competence for sustainable business management as innovation: a research agenda, *Journal of Cleaner Production*, 15(1): 38-51, DOI: 10.1016/j.jclepro.2005.06.002.
- Wall, J. & Ahmed, V. (2008). Use of a simulation game in delivering blended lifelong learning in the construction industry - Opportunities and Challenges, *Computers & Education*, 50(2): 1383-1393, DOI:10.1016/j.compedu.2006.12.012.
- Wu, L.-C., Ong, C.-S. & Hsu, Y.-W. (2007). Knowledge-based organization evaluation, *Decision Support Systems*, 45(3): 541-549, DOI: 10.1016/j.dss.2007.06.013.

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### **Inovacije in vseživljenjsko učenje v trajnostni organizaciji**

**Povzetek:** Inovativnost in znanje sta dva izmed ključnih elementov za napredek podjetja ali organizacije. Še posebej v trenutnem obdobju gospodarske krize je ključno, da se spodbujata ustvarjalnost in inovativnost, saj prispevata k inovativnim rešitvam različnih problemov. H krepitvi zavedanja o pomenu inovacij in ustvarjalnosti pri trajnostnem razvoju organizacije pomembno prispeva vseživljenjsko učenje. V tem prispevku sva raziskali kakšno pomembnost zaposleni iz slovenskih podjetij pripisujejo inovacijam in vseživljenjskemu učenju za trajnostni razvoj podjetja. V prispevku so predstavljeni rezultati raziskave, izvedene v 67 velikih in srednje velikih podjetij v Sloveniji, s katero sva na podlagi ocen anketirancev preučili povezavo med stopnjo inovativnosti in vseživljenjskega učenja, vlaganjem v inovativnost in konkurenčno prednostjo podjetja ter spodbujanjem vseživljenjskega učenja in konkurenčne prednosti organizacije. Predstavljeni so tudi odgovori na vprašanja, ali vseživljenjsko učenje prispeva k trajnostnemu razvoju organizacije in ali večja skrb organizacije za njen trajnostni razvoj vpliva na njeno konkurenčno prednost v primerjavi z enakimi ponudniki na trgu.

**Ključne besede:** inovacije, vseživljenjsko učenje, trajnostni razvoj organizacije