# Perceived Factors and Obstacles to Cognitive Schema Change during Economic Crisis

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The main objective is to present the perceived factors in cognitive schema change as experienced by participants from two Slovenian sectors and to compare them with factors from schema change theory in order to evaluate specific circumstances and obstacles to effective cognitive schema change. 31 interviews with participants from six companies were conducted twice during the 2008 economic crisis. The prevalent perceived antecedents of schema change lie within an organisation and in the business environment. Stimulating factors are also economic and financial crises and personal characteristics. The prevalent obstacles to schema change, as perceived by participants, are stability of current cognitive schemas, personal characteristics of management, and rigidity.

**Key words:** cognitive schema, change, factors, obstacles, economic crisis

## 1 Theoretical background

In this paper we present one part of a broader qualitative cognitive schema research. Influencing factors in schema change, as perceived by representative members of two sectors in Slovenia during the 2008 economic crisis, are presented.

Economic crisis is a period of financial insecurity, often illiquidity as well, and consequently of increased likelihood of employee dismissals and transfers as well as other methods of crisis management. In such a period, there are various speculations on the actual scale of the crisis and even the most prominent economists do not guarantee for their own predictions. Consequently, players in economy experience increased insecurity and lack of orientation. The existing studies (e.g. Bartunek 1984; Reger and Palmer 1996; Diplock 1999; McKinley et al. 2000) show that the way how individuals perceive changes influences their behaviour. Although the expectations and knowledge of individuals usually serve them well, the rigid and poor informational presumptions in schemas lose their functionality in new situations or changed circumstances and therefore need to be examined anew.

In social psychology, cognition and mental processes have always had an important role. As the main interest of social psychology is social context, it is common to use the term social cognition. Social cognition is mainly an automatic process with only minor conscious awareness. According to the definition, the centre of social cognition is in its study of social context in social behaviour (Fiske and Taylor, 1991). In this view, perception is rather active construction on the basis of individuals' beliefs, experiences, values, etc., which are stored in cognitive schemas. Poole et al. (1989) believes that in times of organizational changes organizational schemas become more explicit. The time of changes thus gives an opportunity for studying the processes of organizational transformation.

### 1.1 Cognitive schemas

In general, cognitive schemas are viewed as everyday subjective theories about how the world operates, so they are important sense-making frameworks. Organisational or interpretive schemas are defined as shared knowledge frames for understanding and behaviour in an organisation. They provide interpretation and organisation of experience in an organisation (Bartunek, 1984). For example, one's "department" schema would include the knowledge regarding typical attributes (e.g. colleagues, boss, office, break, work) and the relationships between those attributes (e.g. the boss allocates benefits to employees) (e.g. Augoustinos et al., 2006).

Cognitive schema theories assume that people rapidly generalize their schemas, and with increased experience they become more abstract, complex, organized and compact. People learn schemas from direct experience or from other people's communications (Hala, 1997). Cognitive schemas have several functions: they help a person identify incoming stimuli with providing hypotheses about stimuli; they help with interpreting the stimuli and with gathering further schema-related information (Poole et al., 1989). Schemas

also guide subsequent behaviour in response to information (Harris, 1994).

McKinley et al. (2000) suggest schemas are often a result of social interaction and negotiations which, at one point, lead to a specific standard or »typification«. Once established, they tend to endure and become resistant to change, even when disconfirming information is presented (Reger and Palmer, 1996). However, they can change over time, particularly if the information in the environment is dramatically altered (Bartunek, 1984; Fiske, 2000). An economic or organizational crisis may thus be seen as one of the factors that may lead to cognitive schema change (e.g. Bartunek, 1984; Chattopadhyay et al., 1999). Cognitive schemas may, furthermore, differ across participants from different companies or sectors because of different antecedents.

## 1.2 Antecedents of organizational schema change

The main *research question* of this paper concerns antecedents of schema modification. What are the main influencing factors that lead to schema modification and change? Which circumstances of the inner and outer environment determine whether new information will be assimilated (brought about) into the existing schema, and in which circumstances will the existing schemas be accommodated (changed) in order to fit the environment?

*Influencing factors in effective schema change*

According to the literature, two types of factors that may have an influence on schema change exist, namely personal and organisational (Grossenbacher, 2008).

Some of the personal factors are:

- personality, personal history, background and beliefs (Axelrod, 1973; Poole et al., 1990);
- function in a company (Grossenbacher, 2008);
- the degree to which business situation is perceived as threatening (Grossenbacher, 2008);
- organisational commitment and general attitude toward change (Bartunek, 1984; Lau and Woodman, 1995);
- motivational background, e.g. the need to understand and share social reality, which is enabled through the processes of social comparison (Harris, 1994).

Among organisational antecedents are, for example:

- crisis (within oneself, in an organisation or in the environment) (Bartune, 1984; Schein, 1980; Isabella, 1990; Chattopadhyay et al., 1999);
- personal characteristics of management, e.g. age, work experience, hierarchical level, national culture (Grossenbacher, 2008);
- perceived challenges in the business environment (Bartunek, 1984);
- changes in managers' value system or within a new management team (Bartunek, 1984);
- organisational structure changes (Bartunek, 1984);

- shifts in sense-making: definition and adoption of new values, vision and mission (Balogun and Johnson, 2004; Isabella, 1990; Labianca, Gray and Brass, 2000);
- the degree to which management encourages participation (Kelly and Gennard, 1996);
- developing deep understanding of various perspectives on the organisation, defining and implicitly or explicitly fostering new organisational schemas (Chattopadhyay et al., 1999; Poole et al., 1989).

*Obstacles to effective schema change*

There are tendencies toward the preservation of existent schemas. Individuals are motivated to preserve them in order to retain understanding of the social reality and to give meaning to it. Once cognitive schemas are established, individuals feel psychological safety and (organisational) surroundings are interpreted as known and manageable. Information processing and retrieval from memory is more functional and faster (Balogun and Johnson, 2004).

According to literature, there are several obstacles to long lasting and in-time schema change:

- modification of (schema-incongruent) information in order to conserve the old schema (Augoustinos et al., 2006);
- organisational identity, which serves as extremely strong schematic filter for understanding, interpreting and responding (Reger et al., 1994);
- bounded capacity for learning and integration of new information with old schemas (Augoustinos et al., 2006; Reger et al., 1994; Schein, 1980);
- low level of cognitive consciousness (Fiske, 2000);
- too big a gap between current experience and expectations (Fiske, 2000).

Demands toward schema change can lead to increased levels of uncertainty and paralysis of individuals. Schein (1980) adds that attempts to change cognitive schemas can be perceived by an individual as stressful and harmful events.

## 2 Methods

### 2.1 Participants

Altogether 31 in-depth interviews were conducted with participants from six Slovenian companies. Interviews were conducted twice with 16 representative members of the companies, namely with CEOs, Executives in HR department and trade union leaders. Previously made studies are partly the argument for this particular selection of interviewees; e.g. Isabella (1990) showed that managers are in the centre of cognitive shifts. HRM managers were selected because we assumed they are in contact with the schemas of organizational members. Interviews were conducted also with trade unionists, who served as a data source of a different perspective and served triangulation purposes (Table 1). After one year, interviews with the selected interviewees were repeated in order to explore antecedents of potential schema change.

*Table 1: Structure of the interviewees according to the sector and their position in the organisation.*

| Sector | Top management | | HRM executives | | Trade unionists | |
|---|---|---|---|---|---|---|
| | *2009* | *2010* | *2009* | *2010* | *2009* | *2010* |
| **Manufacturing** | + | | + | + | + | + |
| | + | + | + | + | + | + |
| | + | + | + | + | + | + |
| **Financial** | + | + | + | + | + | + |
| | + | + | + | + | | |
| | + | + | + | + | | |

The average age of the participants was 50 years. The ratio between men and women was 10:6. The interview with one participant was postponed due to his health problems.

The selected companies operate in the automotive industry and in the financial sector, which were both affected in the economic crisis. Because of the initial troubles regarding the access to the highest managerial positions during the crisis, a convenience sample was used. In spite of this, we consider the selected companies appropriate representatives of their industry, because most of them are renowned and one of the largest in their branch.

## 2.2 Instruments

An in-depth interview was chosen as the most appropriate methodology for assessing cognitive schemas. Interview transcripts were coded and analyzed by the computer program for qualitative data analysis ATLAS.ti. With the help of this program, research consistency and internal reliability can be increased (Hannes et al., 2009).

## 2.3 Procedure

In-depth interviews were conducted twice from April 2009 to October 2010. First interviews (April – September 2009) were followed by second ones after one year (April – October 2010). All interviews were tape-recorded. The transcripts were further followed by additional comments. Interviews lasted on average 55 minutes. They were followed by the transcription, coding and analysis in the ATLAS.ti program.

In first-order analysis we ascribed meaningful quotes to relevant codes and made summaries according to our research questions. In second-order analysis conclusions were made on the basis of the first-order analysis findings and conceptual framework was established. In the second order analysis, a researcher is able to find common themes within several different codes according to matching contents in these codes. Those themes are afterwards merged into larger conceptual frameworks that correspond to the main attributes of cognitive schemas in the selected companies.

In order to avoid subjectivity when conducting in-depth interviews, the following precautions were made: enough time was allocated for discussion part in order to get additional information. An additional researcher, uninformed about research aims but experienced in coding, independently coded a sample of interview material. We considered 88 % of the material allocated to the same codes an adequate compliance. This was considered a minimum condition of scientific research, by which it was still possible to get research autonomy and at the same time retain participants' own expressions, which was emphasized as a *sine qua non* in cognitive schema research (Diplock, 1999).

## 3 Results

Quotes regarding cognitive schema change were searched for in all the existing codes that had arrived for analysis in the ATLAS.ti program. Whereas sum of all codes was 52, quotes from 19 codes were extracted for the research aim of this paper. In the results section, first order analysis is presented in brief in table 1, which is followed by second order analysis.

In table 2, perceived factors and obstacles to cognitive schema change as derived from participants' quotes are listed:

A difference in occurrence of some themes in table 2 is due to differences in schemas that exist among individuals in different companies and in different sectors. Table 2 sums up the most prevalent factors that might lead to, or decelerate cognitive schema change according to number of quotes in codes Crisis affects schemas of HRM, Crisis affects schemas in an organization, Crisis does not affect organizational schemas, Disagreement in an organization, Obstacles to schema change, Other factors affect schemas and Sleepiness in an organization.

The most occurring factors that stimulate cognitive schema change are, according to the interviewees, new strategy or mode of operation and relationship with management and competence of the personnel, and, to a certain extent, the current (2008 -) crisis. Among perceived obstacles, the stability of current schemas and personal characteristics and values of management & employees were stressed by the interviewees.

*Table 2. Perceived factors and obstacles to cognitive schema change.*

| Perceived factors | Frequency* | Perceived obstacles | Frequency* |
|---|---|---|---|
| New strategy or mode of operation | Extremely high to moderate | Stability of current schemas | Extremely high |
| Relationship with management and competence of the personnel | Extremely high | Personal characteristics and values of management & employees | Moderate to high |
| Current (2008 -) crisis | Low to high | "Sleepiness" and rigidity & personal advantages of previous schemas | Moderate |
| Disagreement within company | Moderate to high | Legislation | Moderate |
| (Personal) crisis | Moderate to high | Organisational & national culture | Low to high |
| Coercion in the business environment | Moderate to high | Previous crises | Low |
| Personal characteristics of employees & self-interest | Moderate to high | | |
| Sectorial and organisational specifics | Moderate | | |
| Experience with change (previous crises) | Non-existent to moderate | | |

\* *0-5 quotes: non-existing or low presence of the theme in a cognitive schema; 6-11 quotes: moderate presence of the theme in a cognitive schema; 12-17 quotes: high presence of the theme in a cognitive schema; 18 or more quotes: extremely high presence of the theme in a cognitive schema.*

First order analysis was a good starting point for further exploration of antecedents in cognitive schemas change. The occurrence of the themes (see Table 1) was searched for in larger number (19) of codes that were significant for the purposes of this paper. On this basis, attributes of cognitive schema change and persistence were formed.

***Prevalent perceived factors in schema change***

Following the research data, it was possible to find three most occurring groups of factors that promote and foster schema change:

**Within an organisation & in the business environment**
*(new business strategy, sectorial specifics, disagreements, restructuring, etc.)*
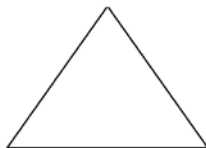


**Economic and financial crisis**
*(current crisis, previous crises)*

**Personal characteristics**
*(personal crisis, self interest, disagreements, relationship with management, competences, etc.)*

*Figure 1: Factors in cognitive schema change among the selected companies.*

Cognitive schema change may exist, first of all, due to organisational factors, such as new business strategy, sectorial specifics, disagreements and restructuring. The second most occurring factors are economic and financial crises (current and previous ones), which are followed by intrapersonal factors. This group of factors is the most heterogeneous one and consists of various intra- and interindividual variables, i.e. crisis within an individual, interests of organizational members, disagreements between organizational members, and relationship with management and competences of the HRM executives.

Below are listed examples (quotes) of the main perceived factors that stimulate schema change. Letters A and F in brackets are abbreviations for the financial and automotive industry interviewees. The first number is an interview number and the second number stands for consecutive quotations number of this particular interview.

1) **Within an organisation & in the environment**
Coercion in the business environment:
*"We will proceed in this direction on our own, of course, because conditions force us. If we want to employ young, competent, motivated human resources, we are forced to create conditions that will motivate them."* (A 9:52)

From this quote, it can be assumed that forces in the business environment stimulate this company to improve their working environment and reward system in order to get (and retain) competent engineers and other talented human resources. This feature was more evident in companies that

operate on the international automotive market in comparison to the selected financial institutions.

## 2) Economic and financial crisis

*"As far as the future is concerned, it is certainly bright. But bright at this moment doesn't mean that we'll still bag 20 % a year, bright is 0.5 % above inflation and you'll be called Sir if you preserve your money. Years will come, though, when you will be able to gain more, if you invest properly."* (F 14:78)

The current economic crisis is working as leverage for cognitive shifts. In the upper example it can be seen that the definitions of gains and losses in the selected banking sector institutions have (at least temporarily) changed. This particular feature was more evident among the interviewees from financial institutions, whereas in manufacturing companies former (economic) crises led to more stable and enduring schemas that are serving them well also in this crisis.

## 3) Personal characteristics

(Personal) crisis

*"As far as nature is concerned, I have to say: an individual needs lots of time to change something within oneself. As long as one is not in a crisis or in trouble, as long as one can turn to his rationality and has a command of one's relationships … but this is on a rational level. But when one is in trouble and when one's real self comes out, a lot of work on one's self is needed. Only a personal problem enforces you to do that."* (A 1:61)

This observation was made by a human resource manager, who studies human nature a lot. His experience shows that (personal) shifts in thinking and doing things seldom happen. A major stimulating factor behind (personal) change is, in his opinion, a personal crisis. In this connection was also the idea of changes within an organization. Human resources will, according to this interviewee, not change *per se,* but through a crisis that is perceived on an individual level. Personal characteristics were one of the highly perceived factors behind schema change in companies from both sectors. It seems that sectorial specifics do not play an important role in regard to this factor.

### *Prevalent obstacles to schema change*

On the basis of research data we created a figure of three most occurring obstacles to effective cognitive schema change, as perceived by participants:
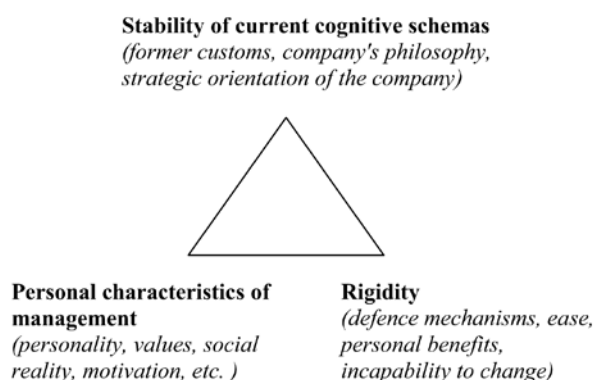


*Figure 2: Factors that worsen or disable effective cognitive schema change.*

Predominant factors that worsen or disable effective schema change among the selected interviewees are the existing cognitive schemas in the organization, the company's philosophy and its business strategy, etc., which have been formed in the past. Current schemas are followed by another factor, i.e. by personal characteristics of participants, such as personality, values, social reality and motivation. The third group of factors are defence mechanisms and other similar types of rigidity, which prevent organizational cognitive schemas the effective and long-lasting change.

Below are listed examples (quotes) of the main perceived obstacles to schema change.

## 1) Stability of current cognitive schemas

*"I was getting on everybody's nerves when I required that we should go through the processes 3 times- how are we going to function. But then, we didn't function properly (laugh). Because it was not communicated clearly enough to employees, and everybody ... fell back into their old forms of functioning, which were known as best and safe."* (F 13:22)

In this quote, a director from a financial institution explains what was happening in this particular company after major restructuring in the current crisis. She emphasized the difficulties, with which they were faced when a new organizational structure enforced them to do their job differently. The existing cognitive schemas may thus be a powerful factor in schemas' maintenance and their reluctance to accept new ones. Even though this example has been taken from a financial institution, the interviewees from automotive companies reported more about stability of current schemas in regard to schema preservation. This is due, in part, to the former crises in this sector that led to "the changed schemas". So in the current crisis, participants cling to the existing "change" attributes.

## 2) Personal characteristics of management

Personality and values of management

*"According to fall-offs in orders, the number of employees could and should be downsized. But still, they are people. Downsizing is a big torture for me."* (A 14:23)

A member of the board of directors at a manufacturing company, which produces for the international automotive industry, explains his inclination towards maintaining his workforce (rejection of downsizing) in the current crisis. This quote may be directly linked to the outcomes in this particular company, in which the statistics of layoffs is particularly low. Personal cognitive schemas may be thus directly connected to managers' behaviour.

## 3) Rigidity

Personal advantages of previous schemas

*"Even though things had changed dramatically in '91 as we entered another system, some people lived in a new system but in their mind they continued to live in the previous one (…), they still wanted to have privileges of the previous system transferred to the current one."* (F 4:46)

This statement is an excerpt from an answer connected with (the lack of) changes in mentality of employees in the selected companies in the banking sector after Slovenia had

gained its independence in 1991. Quotes like this one were especially frequent in both Slovenian banks that were included in this research. In this quote, a trade union leader illustrated the reluctance of one part of population to change cognitive schemas in order to preserve the old privileges. From this it can be assumed that, in an organizational change program, organizational members have to perceive the intended changes (at least in part) as an acquisition for themselves. In this sense, a program will have better chances of desirable outcomes.

# 4 Discussion

We listed several factors and obstacles to effective schema change as perceived by representative members from companies in the two sectors. We have then compared our findings with the ones from the literature.

The most frequently perceived factor that may stimulate cognitive schema change lies *within an organisation or/and in the business environment.* The new business strategy, sectorial specifics, restructuring, etc., may thus foster schema change. This is to certain extent in accordance with the findings of other researchers. In her famous study of a religious order, Bartunek (1984) asserted that changes in organisational structure may act as a lever for cognitive shifts of order members. The implication for managers is that changes in the company and in the business environment foster cognitive schema change. Furthermore, the results show that if changes in an organisation are to be carried out, they should be in accordance with other specifics of a particular organisation and/or a sector.

Also, the *economic and financial crisis* was one of the most perceived factors that might stimulate cognitive schema change, as reported by the selected interviewees. They reported crisis as a force of schema change within themselves, in an organization or in society in general. This was expected, since interviews were conducted in the middle of the economic crisis and such time is in the social cognition literature listed as one of the prevalent factors in schema change, because participants realise that their old schemas are not congruent with the new situation/environment any more. Therefore, schemas have to be revisited in order to survive in social environment. This is also in accordance with other research findings that suggest crisis is often the predominant force for cognitive schema change (e.g. Schein, 1980; Bartunek, 1984; Isabella, 1990; Chattopadhyay et al., 1999).

Frequently, a perceived antecedent of schema change is also *personal characteristics of management.* Personal characteristics of management were the third frequently mentioned possible antecedent of schema change. This is congruent with research findings that management's personal variables, value systems and their shifts in sense-making co-create conditions for schema change (e.g. Harris, 1994; Lau and Woodman, 1995). Also, personal characteristics of employees and their interest in schema change might be important. From this it follows that individuals differ among each other in their motivational background, in personality, beliefs ... It can be concluded that motivation level and other personal characteristics are important antecedents of cognitive schema change and this should be admitted when planning the organizational change program. Cognitive schemas of individuals in an organization should be explored prior to program execution. Individuals differ from each other as well as their organisational commitment and general attitude towards change. In the future, our aim is to explore which personal variables are predominant antecedents of cognitive shifts and to what extent is each of them present. In order to do this, quantifications of research results on the basis of quantitative methodology is intended.

Another possible scenario for cognitive schema change is coercion in the business environment (see Table 1), such as a need to act globally or aggressive competitors. In her case study, Bartunek (1984) reports perceived challenges in the business environment are an important antecedent of schema change. Coercion can therefore be a powerful determinant of schema change, but on the other hand, it can also be a cause for rigidity of organisational members. When a gap between current experience and expectations is too big, it can lead to defence mechanisms.

On the other hand, some obstacles to cognitive schema change were identified by the interviewees from the selected companies. Most commonly perceived obstacle to schema change is the *stability of current cognitive schemas.* According to their answers, former customs, company's philosophy, strategic orientation of the company and similar are the main factors in schema preservation. This is in accordance with Augoustinos et al. (2006), who stated that individuals may undergo modification of schema-incongruent information in order to sustain and conserve the old schemas.

*Personal characteristics*, such as personality, values, social reality, motivation, etc., are, according to our respondents, the most frequent second factor against cognitive schema change.

Personal characteristics and values of organizational members and personal characteristics of employees were recognised as an obstacle to schema change. This is interesting and worth of further research interest. Demands towards schema change can lead to an increase in the levels of uncertainty of individuals. According to Schein (1980), attempts to cognitive schema change can be perceived as stressful and harmful events. Further analyses could show a more accurate picture of personal characteristics that act as obstacles to schema change, so quantifications in further research phases are needed in order to identify and further investigate the barriers that can reinforce the old schema.

Because organizational changes are perceived as stressful events for organization members, it is important for managers to minimise the feelings of uncertainty and threat. This can be done by frequent and substantial internal communication about the reasons and stages at which a change program is. The consequences and (if possible) the amenities of a change program for individual members should be presented as well. Furthermore, not only top-down communication channels, but also the opposite direction communication should be planned.

*Rigidity,* such as defence mechanisms, ease, personal benefits, incapability to change, is the third group of factors that prevent cognitive schema change (or at least make it more difficult). "Sleepiness" and rigidity of the entire (mostly banking) sector and of individual employees are most commonly perceived obstacles to schema change. This can be explained partly by the lack of previous crises in banking sector. Partly,

"sleepiness" and rigidity are a consequence of inclination to modify any incongruent information in order to conserve the old and well preserved schema. Learning and integration of new information with old schemas are therefore limited. In addition, among the main obstacles to effective cognitive schema change were also personal advantages of previous schemas (Reger et. al., 1994). So the implication for managers is that if organization members do not see the benefits of accepting/integrating new schemas, it is less likely for them to become prevalent. Secondly, if a planned change program is too ambitious in a sense that a gap between the existing and planned schemas is big, the success of a planned schema transformation is limited.

### Limitations and suggestions for further research

At the end, some limitations of this study should be mentioned. First of all, the design of the study does not allow making generalizations about factors in cognitive schema change of organizational members as a whole. Secondly, our sample was to a certain extent auto-selected. Some methodological reservations are connected with this, namely only managers that do not experience major existential problems within the company are willing to participate. In spite of this, we consider companies in each sector eligible representatives of their field of operation, either because of their size, or because of their position in the Slovenian market. Thirdly, more data sources improve research reliability. In further stages of research we, therefore, plan to access company publications, such as annual reports and strategic plans in order to improve the research findings.

In the future phases of research, more data sources (annual reports, company publications) will be taken into account in order to improve validity and reliability of the research findings. Furthermore, quantitative research will be conducted in order to specify and quantify predominant (personal) factors that stimulate and/or prevent cognitive schema change. This is important as all (cognitive) shifts in companies are basically derivatives of cognitive schema changes. Knowing the factors that promote or worsen the probability of schema change is thus important in attempts to manage change.

## 5   References

Augoustinos, M., Walker, I. & Donagheve, N. (2006). *Social Cognition: An Integrated Introduction*. 2. ed. London: Sage Publications.

Axelrod, R. (1973). Schema Theory: An Information Processing Model of Perception and Cognition. *The American Political Science Review*, 67 (4): 1248-1266. DOI:10.2307/1956546

Balogun, J. & Johnson, J. (2004). Organizational restructuring and middle manager sensemaking. *Academy of Management Journal*, 47 (4): 523–549. DOI: 10.1017/CBO9780511618925.013

Bartunek, J.M. (1984). Changing Interpretive Schemes and Organizational Restructuring: The Example of a Religious Order. *Administrative Science Quarterly*, 29: 355-372. DOI: 10.2307/2393029

Chattopadhyay, P., Glick, W.H., Miller, C.C. & Huber, G.P. (1999). Determinants of Executive Beliefs: Comparing Functional Conditioning and Social Influence. *Strategic Management Journal*, 20 (8): 763-789. DOI: 10.1002/(SICI)1097-0266(199908)20:8<763::AID-SMJ46>3.0.CO;2-D

Diplock, P. C. (1999). Organizational change schemas: An empirical investigation of how health care managers make sense of organizational change. *Abstracts International Section A: Humanities and Social Sciences*, 60 (2-A): 0479.

Fiske, S. (2000). Schema. In: Kazdin A.E. (Ed.), *Encyclopedia of psychology*, 7: 158-160. Washington, D.C.: American Psychological Association.

Fiske, S. and Taylor, S.E. (1991). *Social cognition*. 2nd ed. New York: McGraw Hill.

Grossenbacher, S. (2008). *Inside the Mind of Decision Makers: Antecedents and Consequences of Managers' Mental Models*. Hamburg: Verlag Dr. Kovač.

Hala, S. (ed.). (1997). *The development of social cognition*. East Sussex: Psychology Press Ltd.

Hannes, E., Janssens, D. & Wets, G. (2009). Does Space Matter? Travel Mode Scripts in Daily Activity Travel. *Environment and Behavior*, 41: 75 - 100. DOI: 10.1177/0013916507311033

Harris, G.S. (1994). Organizational Culture and Individual Sensemaking: A Schema-Based Perspective. *Organization Science*, 5 (3): 309-321. DOI: 10.1287/orsc.5.3.309

Isabella, L.A. (1990). Evolving interpretations as a change unfolds: How managers construe key organizational events. *Academy of Management Journal*, 33: 7-41. DOI:10.2307/256350

Kelly, J. & Gennard, J. (1996). The role of personnel directors on the board of directors, *Personnel Review* 25 (1): 7-24. DOI: 10.1108/00483489610147825

Labianca G., Gray, B. & Brass, D.J. (2000). A Grounded Model of Organizational Schema Change during Empowerment. *Organization Science*, 11 (2): 235-257. DOI: 10.1287/orsc.11.2.235.12512

Lau, C.M. & Woodman, R.W. (1995). Understanding Organizational Change: A Schematic Perspective. *The Academy of Management Journal*, 38 (2): 537-554.

McKinley, W., Zhao, J. & Garrett Rust, K. (2000). A Sociocognitive Interpretation of Organizational Downsizing. *The Academy of Management Review*, 25 (1): 227-243. DOI: 10.2307/259272

Poole, P.P., Gioia, D.A. & Gray, B. (1989). Influence modes, schema change, and organizational transformation. *Journal of Applied Behavioral Science*, 25: 271-289. DOI: 10.1177/0021886389253004

Poole, P.P., Gray, B. & Gioia, D.A. (1990). Organizational Script Development Through Interactive Accommodation. *Group and Organization Studies*, 15 (2): 212 – 233. DOI: 10.1177/105960119001500206

Reger, R.H. & Palmer, T.B. (1996). Managerial Categorization of Competitors: Using Old Maps to Navigate New Environments. *Organization Science*, 7 (1): 22-39. DOI: 10.1287/orsc.7.1.22

Schein, E.H. (1980). *Organizational Psychology*, 3rd ed. Englewood Cliffs, New Jersey: Prentice-Hall.

Shetzer, L. (1993). A Social Information Processing Model of Employee Participation. *Organization Science*, 4 (2): 252-268. DOI: 10.1287/orsc.4.2.252

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**Zaznani dejavniki in ovire pri spreminjanju kognitivnih shem med gospodarsko krizo**

V prispevku so predstavljeni dejavniki spreminjanja kognitivnih shem, kot jih zaznavajo udeleženci iz dveh slovenskih panog, ki jih primerjamo z glavnimi dejavniki iz teorije kognitivnih shem. Namen raziskave je ovrednotiti poglavitne dejavnike, ki spodbujajo in ovirajo dolgoročno in trajno spremembo kognitivnih shem. V dveh časovnih obdobjih v času finančne in gospodarske krize je bilo opravljenih 31 intervjujev s predstavniki šestih podjetij. Rezultati kažejo, da so med prevladujočimi dejavniki, ki spodbujajo spremembo shem dejavniki znotraj podjetja in v poslovnem okolju. Sledijo jim aktualna gospodarska kriza ter osebne spremenljivke. Prevladuoči dejavniki, ki ovirajo spremembo kognitivnih shem, so stabilnost obstoječih kognitivnih shem v organizaciji, osebne spremenljivke managementa in rigidnost.

**Ključne besede:** kognitivne sheme, spremembe, spodbudni dejavniki, ovire, gospodarska kriza