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ORGANIZATIONAL INNOVATION DIAGNOSIS: A CASE STUDY

DIJAGNOSTIKA ORGANIZACIJSKE INOVATIVNOSTI: STUDIJA SLUČAJA

ABSTRACT

Modern business is focused on innovation. Organizational innovation diagnosis is the first step in building a culture that supports and applies innovation as a key driver of competitive advantage. The aim of this research is to diagnose the current situation of organizational innovation in a domestic production organization from the chemical industry. The method is based on organizational innovation diagnosis model, which assumes the existence of four key factors needed for successful innovation implementation: Strategy, Process, Ideas and Climate. The model was customized for use in a specific company for the purpose of conducting structured interviews on a sample of 33 mid-level managers. The main problems of this research are to examine whether there is a difference in the prevalence of particular innovation factors within the organization and whether there is a difference in the perception of the indicated (key) factors between functional units of the organization. Qualitative data analysis showed that the factors of Ideas and Climate are more developed in the organization than the Strategy and Processes factors. The results also showed no statistically significant differences in the perception of organizational innovation factors between functional units which are directly involved and responsible for the development of new technologies, products and processes in relation to the perception of these factors in the remaining organizational units.
The results of this qualitative research might be useful in focusing management efforts in overcoming the crucial organizational innovation weaknesses using the recognized organizational innovation strengths.

Key words: *organizational innovation, organizational diagnosis, factors of organizational innovation*

SAŽETAK

Inovativnost je imperativ suvremenog poslovanja. Dijagnostika organizacijske inovativnosti prvi je korak u izgradnji kulture koja potiče i primjenjuje inovativnost kao ključ za postizanje kompetitivne prednosti. U skladu s navedenim, cilj je ovoga rada dijagnosticirati aktualno stanje organizacijske inovativnosti u domaćoj proizvodnoj organizaciji iz kozmetičke industrije.

Metoda je utemeljena na modelu dijagnostike organizacijske inovativnosti koji pretpostavlja postojanje četiri faktora ključna za uspješnu implementaciju inovativnosti: Strategija, Procesi, Ideje i Klima. Model je prilagođen upotrebi u konkretnom poduzeću u svrhu pripreme i provođenja strukturiranog intervjua na uzorku od 33 rukovoditelja srednje razine.

Glavni su problemi rada ispitati postoji li razlika u zastupljenosti pojedinih faktora inovativnosti unutar organizacije te postoji li razlika u percepciji navedenih faktora inovativnosti među funkcionalnim jedinicama organizacije.

Kvalitativna analiza podataka pokazala je kako su faktori Ideje i Klima značajno razvijeniji od faktora Strategija i Procesi. Nadalje, rezultati pokazuju kako ne postoji statistički značajna razlika u percepciji faktora organizacijske inovativnosti između funkcionalnih jedinica organizacije neposredno zaduženih i odgovornih za razvoj novih tehnologija, proizvoda i procesa i percepcije istih faktora u preostalim organizacijskim jedinicama.

Rezultati ovog kvalitativnog istraživanja mogli bi usmjeriti napore rukovodstva na prevladavanje ključnih slabosti inovativnosti u poduzeću koristeći prepoznate snage organizacijske inovativnosti.

Ključne riječi: *organizacijska inovativnost, organizacijska dijagnostika, faktori organizacijske inovativnosti*

1. Introduction

Organizational innovation refers to inventing or importing technologies, products, services, or administrative practices that are new to the organization (Harrison and Shirom, 1990). Innovativeness contributes to organizational adaptation, especially in industries faced with challenges of adaptation to rapid changes in the environment. Factors that are considered to help large organizations develop and sustain organizational innovativeness are the following: strategic thinking and decision making, resource allocation, human resource management and structure (Klein and Sorra, 1996; Harrison and Shirom, 1990; Kanter, 1983). Studies of organizational innovation frequently show that creative businesses manage the environment more and they record a higher degree of adjustment to changes in the environment when compared with others (West and Farr, 1990). Researchers agree that both the top and middle level management are responsible for the development and implementation of innovation in the organization (Legrand and Weiss, 2011; Smith and Hall, 2012). Knowledge and understanding by the management of the internal situation of the organization is of key importance for the development of effective strategies for facing changes in the environment. Therefore, it is imperative to properly diagnose the current situation of organizational innovation. For the purpose of organizational diagnosis, researches use various models (Harrison and Shirom, 1990; Vitale, Armenakis and Feild, 2008). The organizational innovation diagnosis model used in this research was developed by the consultant firm Futurethink, specialized in this area, with the aim of determining factors that differentiate innovative and non-innovative organizations (Waghorn and Hagerman, 2007). The model is based on four key factors of organizational innovation: *Strategy* - how companies focus their

innovation in areas that enhance their core business, *Climate* - how they build a thriving culture that stimulates innovative behavior across their organization, *Process* - how they create a streamlined and objective process to capture, evaluate and launch their best ideas and *Ideas* - how they know how to generate innovative ideas based on their business objectives. The fundamental assumption of the model is that the presence of all factors is equally important for organizational innovation. The aim of this research is to diagnose the current situation of organizational innovation in a domestic production organization from the chemical industry. The main problems are to examine whether there is a difference in the prevalence of particular innovation factors within the organization and whether there is a difference in the perception of the indicated (key) factors between functional units of the organization. In the absence of statistical prove on alternative hypotheses, the assumption is that all four organizational innovation factors will be equally prevalent within the organization and that there will be no difference in the perception of the four factors between groups of indicated functional units.

2. Method

2.1. Sample

The organization in this case study employs approximately 850 workers, which is organizationally divided into nine functional units, each of which is hierarchically organized from an unequal number of smaller organizational units of a total of thirty three. The managers of these organizational units (N=33) are chosen as subjects in this research for at least three reasons. First, the assumption is that mid-level managers have the most complete insight in the current situation of organizational innovation considering their direct cooperation with the rest of management levels and employees. Second, the vertical flow of information in the hierarchical organizational structure depends to a greater extent on that management level. Finally, in the development process and implementation of organizational innovation, the role of mid-level managers, next to the top-managers, is considered essential (West and Farr 1990).

2.2. Instruments and procedure

In order to collect data about the innovation situation in the organization, a structured interview was developed. Questions that were used in the interview are constructed and tailored on the aforementioned organizational innovation diagnosis model which is composed of four factors. In order to test the presence of each of the innovation factors, 10 questions were prepared for each factor (see Table 1 in the annex).

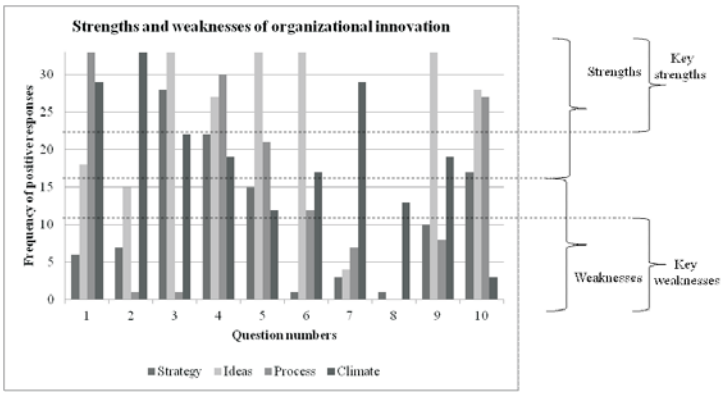
The conducting research was previously approved by the top-management.
Interviews lasting in approximately 45 minutes were conducted successively, with each of the mid-level manager by functional units, individually. Interviews were conducted during working hours in a time-span of three weeks. During the interviews, the answers of the respondents were recorded by the interviewer in the way that each answer was immediately marked as positive (+) or negative (-), or as a strength or weakness of organizational innovation. Each response was supported by a note on the key argument and/or concrete examples from organizational practice.

3. Results

3.1. Strengths and weaknesses of organizational innovation

The strengths and weaknesses are used in the original model of organizational innovation as the common denominator of the qualitative analysis, or the interpretation of the responses. This defines the representation of each individual factor in the overall organizational innovation. The results of the research (see overall data in Figure 1) show that key strengths of innovation in this firm are in the area of the factors *Ideas* and *Climate*, while key weaknesses of organizational innovation are in the area of the factors *Strategy* and *Process.*

Figure 1. Strengths and weaknesses of organizational innovation in the studied firm



Source: authors

A more detailed insight in the responses on individual questions (*see Figure 1 and Table 1*) shows that key strengths of this organization with respect to innovation are the following:

- continuous work on improving offerings, identifying customer needs, successful collaboration with other firms in order to generate and implement new ideas, strong belief that innovation is about solving big problems (*Ideas*);
- senior managers believe in the importance of innovation, dedication of their time and budget to it, failure and risk-taking is accepted within the organization (*Climate*);
- shaped multiple idea submission channels to get ideas from diverse sources, conducted evaluation criteria for identifying the best ideas, practice to start with many ideas with minimal investment, and gradually increase resources as focusing on the best ones (*Process*);
- clearly identified issues that have blocked innovation in the past and outlined ways for overcoming them, vision that outlines a path or direction for innovation (*Strategy*).

Also, with regards to responses, the following key weaknesses of organizational innovation were identified:

- lack of a clear vision and strategic initiatives for innovation, different viewpoints about what innovation means for the business, deficiency of holistic and consistent set of metrics for tracking innovation activities (*Strategy*);
- deficiency of the particular resource (individual/group) empowered to make „yes/no“ decisions and lack of a central repository/pipeline that contains every generated idea,

ambiguous criteria for judging ideas, poorly defined approach to take ideas from generation to launch in a timely manner, lack of a holistic perspective of a pool of innovation projects (*Process*);

- organization is the follower and it doesn't have a track record of setting new standards in its industry, employees aren't encouraged to generate ideas to shake up the status quo (*Ideas*);
- there is no formal rewards/recognition program in place that motivates people to participate in innovation (*Climate*).

3.2. Statistical verification of established hypotheses

The hypothesis of equal representation of individual innovation factors within the organization is verified by the Chi-squared test. It shows that there is a statistically significant difference in the representation of individual factors within the organization: *Idea* and *Climate* are evaluated as significantly better than *Strategy* and *Process* (χ^2 = 660,74; *df=40; p*<0.05). The hypothesis on the non-existence of differences in the perception of innovation factors between functional units of the organization that are directly responsible for the development of new technologies, products and processes and the rest of the organizational units was verified in the same way. The results show that there exists no statistically significant difference in the perception of the innovation factors between aforementioned functional units (χ^2 = 1,11; *df*=1; *p*=0.05). Therefore, in those parts of the organization where a potentially higher engagement in the area of innovation is expected, the significance of innovation in business is perceived as equally important as in the rest of the organizational units.

4. Discussion

The results of the conducted research coincides with the results of Waghorn and Hagerman (2008) which show that during the development of organizational innovation, organizations go with the „line of least resistance": in a higher degree, they are focused on the development of *Idea* and *Climate*, neglecting the development of *Strategy* and *Process.* In order to secure long-term business success, it is imperative to equally develop all four innovation factors because the weaker development of only one of them will result in business failure.

The qualitative analysis shows, in terms of innovation strategy, problems that were identified in the organization and which prevented innovation in the past as well as an indication that there is a fundamental awareness on its importance of success in business. The challenge to the management of the firm represents clear, not only declaratory, strategic initiatives aimed at stimulating innovativeness and creation of consistent policy and measures for its monitoring and encouragement. Empirical research confirms that specific innovation strategies enable the organization to use strategic resources with the aim to achieve competitive advantage and financial gain (Wei and Wang, 2011). Krall (2001) states that the highest levels of management are expected to develop and support the vision of innovation, while the middle management, whose opinions and attitudes about innovation were examined in this study, is expected to transfer, interpret and implement this vision of innovation through the organization. Managers have a critical role in creating the culture of innovation. As with all strategic initiatives, innovation also must start at the very top and it needs to be lead with the active involvement and support of management at all hierarchical levels (Smith and Hall, 2012).

Even though strategic objectives of this company in foreseeable future (probably) will not favor a market repositioning and/or change the „game rules“ in the industry, the organization will undoubtedly have to not only support but also enhance observed strengths of organizational innovation. In this sense, management should aim their strategic efforts towards a gradual, and necessary, overcoming of key weaknesses of organizational innovation as well as the development of the process of organizational innovation. Primarily, this refers to the central gathering and „warehousing“ of new ideas, defining unambiguous criteria for their evaluation and facilitating later application of innovations in the organizational practice. In addition, a systematic identification of innovations, with recognition and awards to innovative employees, would eliminate the only diagnosed weakness of the innovative climate in the firm. In fact, research from social psychology of creativity shows that employees are more encouraged to explore new areas and new ways of problem-solving in the organization in which they feel safe (in which they will not be punished for that kind of behavior) and in which they are adequately evaluated for their contribution (Ekwall, 1996; West and Altink, 1996; Jelinek, 1979).

According to the results, the most valuable thing for the innovativeness of this organization is the knowledge and willingness of its employees geared to overcoming organizational problems, as well as the attitude of the employees towards acceptance of failure and learning from mistakes. True innovators are in search for new achievements and are ready for failure, and it is failure that usually leads to new and valuable information necessary for organizational innovation (Ramadani and Gerguri, 2011). Results are encouraging with regards to the regular low tolerance of failure of traditional organizations (Nordström and Ridderstråle, 2002) and relatively weaker development of innovation climate and culture of organizations from central and east Europe when compared to those from Western countries with longer tradition of market economy (Sušanj, 2000).

The findings of this research, according to which factors of organizational innovation are not increasingly present in those functional units that are directly responsible for organizational innovation, perhaps should not be seen as defeating. The division of organizational innovation in technical and administrative terms is generally accepted (Damanpour, 1987). The first is directly concerned to the activity of the organization or the development of its products or services while the other is concerned with the improvement of various administrative processes and procedures in the organization. Given that both types of organizational innovation are important for the improvement of business and because some studies show that administrative innovation encourages technical innovation (Kanter, 1983; Damanpour and Evan, 1984), it can be concluded that in this case, the significance of innovation in business is perceived equally in the rest of the organizational units, which can be useful.

In conclusion, the conducted research for the purpose of the organizational innovation diagnosis enables not only an evaluation of the overall organizational capacity for innovation, but it represents a clear path to management towards ways and means in which business can be improved. Also, this research only confirms conventional opinion according to which different factors are equally important for the development and maintenance of organizational innovation.

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Annex

Table 1. Question for factors: Strategy (S), Ideas (I), Process (P) i Climate (C)

S-Q1. Do you have a vision for innovation that is aspirational for all your employees?
S-Q2. Does everyone have the same viewpoint about what innovation means?
S-Q3. Have you clearly identified the issues that have blocked innovation in the past?
S-Q4. Do you have a vision that outlines the path or direction of your innovation efforts?
S-Q5. Do you have a full time resource assigned to innovation?
S-Q6. Is there a specific individual/group that has a central picture of innovation efforts?
S-Q7. Do you have a holistic set of metrics that measure inputs, development and outputs?
S-Q8. Do you rely on a consistent set of metrics to track your innovation activities?
S-Q9. Has innovation been identified as one of the key strategic initiatives?
S-Q10. Is it clear who the „go-to“resource for innovation assistance is?
I-Q1. Do you engage in futuring techniques to generate ideas?
I-Q2. Do you have a pipeline of ideas that will keep the organization growing well?
I-Q3. Are you constantly looking for new ways to improve your offerings?
I-Q4. Do you have a series of future enhancements to your offerings in place?
I-Q5. Do you have an intimate relationship with customers that helps you intuitively understand their need even when unspoken?
I-Q6. Do you conduct formal studies to familiarize yourselves with your customers?
I-Q7. Are you encouraged to generate ideas to shake the status quo in your industry?
I-Q8. Are you known as a „rule-breaker“?
I-Q9. Do you have collaborated with other firms to generate and implement new ideas?
I-Q10. Do you believe that innovation is about solving big problems?
P-Q1. Do you have a multiple idea submission channels to get ideas from different source?
P-Q2. Are all ideas directed to the resource empowered to make go/no-go decisions?
P-Q3. Do you have a central repository/pipeline that contains every idea that's generated?
P-Q4. Do you rely on set of evaluation criteria that helps you identify your best ideas?
P-Q5. Are you stopping to work on unnecessary ideas?
P-Q6. Is your criteria for judging ideas widely understood and accepted?
P-Q7. Do you have a well defined approach to take ideas from generation to launch?
P-Q8. Do you always launch your innovations in a timely manner?
P-Q9. Do you have a holistic perspective of your pool of innovation projects?
P-Q10. Do you start with many ideas and then you focus on the best ones?
C-Q1. Does management strongly believe the innovation is the lifeblood of business?
C-Q2. Does management play an active part in innovation with dedicated time/budget?
C-Q3. Are the senior managers respected role models when it comes to innovative thinking?
C-Q4. Are your innovation efforts organic and self-sustaining?
C-Q5. Is there a clear definition of what failure means?
C-Q6. Are people encouraged to take risks within your organization?
C-Q7. Is failure and risk-taking celebrated within your organization?
C-Q8. Is there an active culture of dialogs between roles, departments and levels?
C-Q9. Do you have a formal training programs that push new thinking/develop new skills?
C-Q10.Do you have a formal rewards/recognition program in place that motivates people to participate in innovation?