The theoretical-empirical model to support the management of the implementation and sustainability of organizational innovations

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Abstract
Because companies work as a whole and all activities are interconnected, the paper focuses on identifying the most important factors that influence the process of managing the implementation of organizational innovations („OI"). The aim of the paper is to propose a model serving as a support tool for business managers in a complex process of managing the implementation and long-term sustainability of organizational innovations. The model points to the need to coordinate the activities of several business areas, which, in our view, are indispensable for successful management of this process, while stressing the importance of the work of managers. One of its benefits is that it is applicable to different types of subjects. The paper is based not only on the results of research carried out on a sample of 141 Slovak medium and large production companies, but also on professional domestic and foreign literature and a number of studies conducted directly in the business environment.

Keywords: Organizational innovations; Work of managers, Change management; Decision

1. Introduction
At present, businesses operate in dynamically changing conditions where changes have become a daily part of the work of managers. It is essential that performance continually adjust to these conditions and look for opportunities to increase business performance. Opinions about the nature and content of the work of the managers are different. However, flexibility remains a common feature, which means that work of managers is more demanding. They are forced to look for new and more effective ways of planning, organizing, conducting, and controlling, choose the right ways to communicate at all levels of management, while not forgetting the goal which should be achieved by means of organizational innovation. Organizational innovations represent a specific type of innovation that relates to innovative business changes. These can be changes in structure, processes, management processes, business strategy, work organization, external relationships, and so on. These changes have a number of demonstrations and links that need to be appropriately responded and to choose appropriate management procedures. Every change requires considerable attention as it brings various consequences. The success of their management depends on the company's knowledge, requires a differentiated approach, an efficient way of communicating and choosing the right management practices. For this reason, the paper is aimed at designing a model that could serve as a support tool for managers at all levels of management in a complex process of organizational innovation implementation. These can be an effective response to cost optimization, improving overall business performance, improving competitiveness and sustainable growth.

2. Literature Review

2.1. Characteristics and importance of organizational innovations

A number of authors dealt with The characteristics of organizational innovation. Different definitions have emerged, which define their essence from different point of view. In our opinion, Leščišina, Sterna and Dupaľa (1993) bring the most meaningful definition of organizational innovation as a specific type of innovation related to innovative change in the business. Armbruster et al. (2008) claim that they represent changes in the structure and processes of an enterprise arising from the implementation of new managerial and work concepts, as well as practices, such as teamwork in production, supply chain management or quality management systems. Battisti and Stoneman (2010) claim that these innovations include new management practices, a new organization, new marketing concepts, and new business strategies. According to Spišiaková (2008), they include changes in company structure, managerial methods, business practice, organization of jobs, or external relations. According to the Evangelist and Vezzani (2010), organizational innovations relate to change in the organizational structure and operational functioning of enterprises. Slater (1999) states that the most significant changes in the business environment relate to structure, systems and organizational culture. According to Laforet (2011), Battisti and Stoneman (2010) they are changes in company strategy, management practices, organizational structure and marketing concepts. The OECD (2005) states that organizational innovations include the implementation of a new organizational method in business practices, organization of workplaces, or external relations. Do, Yeh and Madsen (2016) claim that these are fundamental changes related to innovations in existing business practices and activities.

The importance of organizational innovations in relation to the business and the work of managers lies in the improvement of work processes, organization of work, working methods and tools, professional skills, workflows, and management and leadership. Sustainably, organizational activities are transformed so as to improve productivity and quality of work. Organizational innovations can also mean an increase in business performance by reducing administrative costs or transaction costs, improving workplace satisfaction, and thus labour productivity, gaining access to nontradable assets, or reducing supply costs (OECD, 2005). The fact that organizational innovations also contribute positively to business performance was confirmed by Soto-Acosta, Popa and Palacios-Marqués (2016), Veselovská (2017a), Evangelist and Vezzani (2012), Subramanian and Nilakanta (1996), Azar and Ciabuschi (2017) Seny Kan and Sarstedt (2016). Tang, Pee and Iiyama (2013) found that their importance lies in lowering costs, increasing flexibility in optimizing capacity or improving quality. Armbruster et al. (2008) claim that they represent an immediate source of the competitive advantage of an enterprise because they significantly affect its performance in terms of productivity, implementation time, quality and flexibility. Mazzanti, Pini and Tortia (2006) also highlight the human resource aspect and argue that new practices often initiated by managers could be more effective if employees are actively involved. As Lopéz-Valeiraz et al. (2016) claim, i tis a non-technological innovation that deals with people rather than with technology. Continuous improvement and innovation is according to Veselovská and Cheung (2014) a permanent challenge and requires both individual and organizational learning processes.

2.2. Organizational innovations in relation to work of business managers

The business management hierarchy consists of three basic levels - top management, middle management, and management at the lowest level of management. According to Laforet (2013), organizational innovations are focused primarily on the strategic level of the enterprise and lead

to strategic implications or outputs that affect the entire business. CEOs are in a key position, as they manage organizational innovation through their leadership behavior (Makri, Scandura, 2010). Crowley (2016) states that an important role is played by management practices that support organizational trust, reciprocity and organizational fairness, which create the satisfaction, commitment and effort of employees. Leaders and their top management teams have the ultimate responsibility for setting strategic directions, making strategic decisions, and creating organizational cultures that support innovations (Kang, Solomon, Choi, 2015). The ability of general directors to manage organizational change directly affects business performance and, according to Siren, Patel and Wincent (2016), is also reflect their quality, the potential absence of which can produce the opposite effect and may be associated with reduced corporate performance. The impact of top management on opportunity assessments and on the development of innovative internal and external organizational processes was also explored by Kickul and Gundry (2001) and they found that it is extremely important that senior management in a rapidly changing competitive environment was able to creatively identify and assess several emerging opportunities. They say that CEOs who overcome traditional management roles and capture creative performance within their top management teams will enable their businesses to grow and profit. Creativity in the innovation process is also highlighted by Kovaľová and Nogová (2016), who assume that it is a precondition for the innovation.

We agree with Odoardi et al. (2015) that management practices and leadership style bring benefits to the innovative behavior of employees. Tracy et al. (2017), however, states that managers are rejecting changes that reduce performance compared to the status quo. Many managerial activities depend on direct personal contact and communication between individuals (Ivancevich et al., 2003). The capabilities of managers include the ability to perform not only physical but also mental activities. The heterogeneity of these cognitive managerial skills can contribute to differentiated performance of businesses under changing conditions (Helfat, Peteraf, 2015).

3. Methodology

The proposal of a theoretical-empirical model to support the management of the implementation process and the sustainability of organizational innovations resulted from the results of our own research carried out in 2016 on the sample of 141 Slovak medium and large production enterprises and focused on examining the impact of organizational innovations on the work of business managers. The results have shown that the implementation of organizational innovations in the work of managers demonstrates itself depending on the particular type of innovation and at the same time we managed to prove direct positive impact on their work. This is a very complex management process, so it was one of the research objectives to identify the key factors that, from our point of view, are the main forces supporting the process of implementation and sustainability of organizational innovation. Detailed elaboration of individual factors can contribute to broadening the current knowledge of change management related to the implementation of organizational innovations, thus supporting strategic decisions of companies that have decided to implement organizational innovation. In the process of the paper preparation we have also used domestic and foreign literature and the results of other domestic and foreign research conducted directly in the business environment. For a brief overview of the sources used, see Table 1.

Table 1 Overview of the sources used

Factor		Authors
OI goals		OECD (2005), Šilhárová (2013), Meroño-Cerdan and López-Nicolas (2017), Kubičková and Benešová (2007), own research
Environment creation	Impact factors	Subramanian and Nilakanta (1996), Ganter and Hecker (2013), Fay et al. (2015), Veselovská (2017b), Franková (2011), OECD (2005), Do, Yeh and Madsen (2016)
	Barriers	Statistical office of the Slovak Republic (ŠÚSR) (2012), The European Economic and Social Committee (EHSV) (2011), Borovský (2005), Tidd, Bessant and Pavitt (2007), Rudy et al. (2001), OECD (2005)
HR management	Approaches in the area of HR management	Farouk a kol. (2016), Akhtar a Renyong (2015), Sutanto (2017), Spahic a Huruz (2012), Jimenez-Jimenez a Sanz-Valle (2013), Kianto, Saenz a Aramburu (2017), Gomes, Hurmelinn a Olander (2017), Lin, Du a Wu, (2016), Andreeva a kol. (2017), Arunprasad (2017), Chiang, Han a Chuang (2011), Lopez-Cabrales, Bornay-Barrachina a Diaz-Fernandez (2017), Seeck a Diehl (2017), Argon a Limon (2016), Ayoola (2015), Fay a kol. (2015), Seongsu (2015), Ju-Yeon a Dong Jin (2015), Do-Hyung a Soon-Ok (2013), Angel a Sanchez (2009), Kaya, Koc a Topcu (2010), Freitas (2011), Sangmook (2017), Diaz-Fernandez, Bornay-Barrachina a Lopez-Cabrales (2017)
	Aversion to changes	Lenberg, Tengberg a Feldt (2017), Yongduk (2013), Parth (2017), Nedelcu a Busu (2015), Moradpour, Heidar a Bahonar (2017), Michel, By a Burnes (2013), Arcinieg a Gonzalez (2009), Oreg (2003), Yun-Hyoung a Jae-jae (2014), Lines a kol. (2017), Zvanca a Rusu (2011), Shcherbakova (2006), Nickelsen (2017), Barrett (2017), Polevaya (2017), Jones a Van de Ven (2016), Turgut a kol. (2016), Battistelli, Montani a Odoardi (2016), Stolnik, Hunjet a Kozina (2016), Levay (2010), Parlalis (2011), Kyung-Kyu (2008), Dorling (2017), Naumtsev (2016),
OI effects		OECD (2005), Laforet (2013), Laforet (2011), Shoham et al. (2012), own research
OI measurement		OECD (2005), Kováč and Sabadka (2003), Forman (2012), Strhan (2010), Závarská (2012), Rúčková (2008), own research

Source: Own processing.

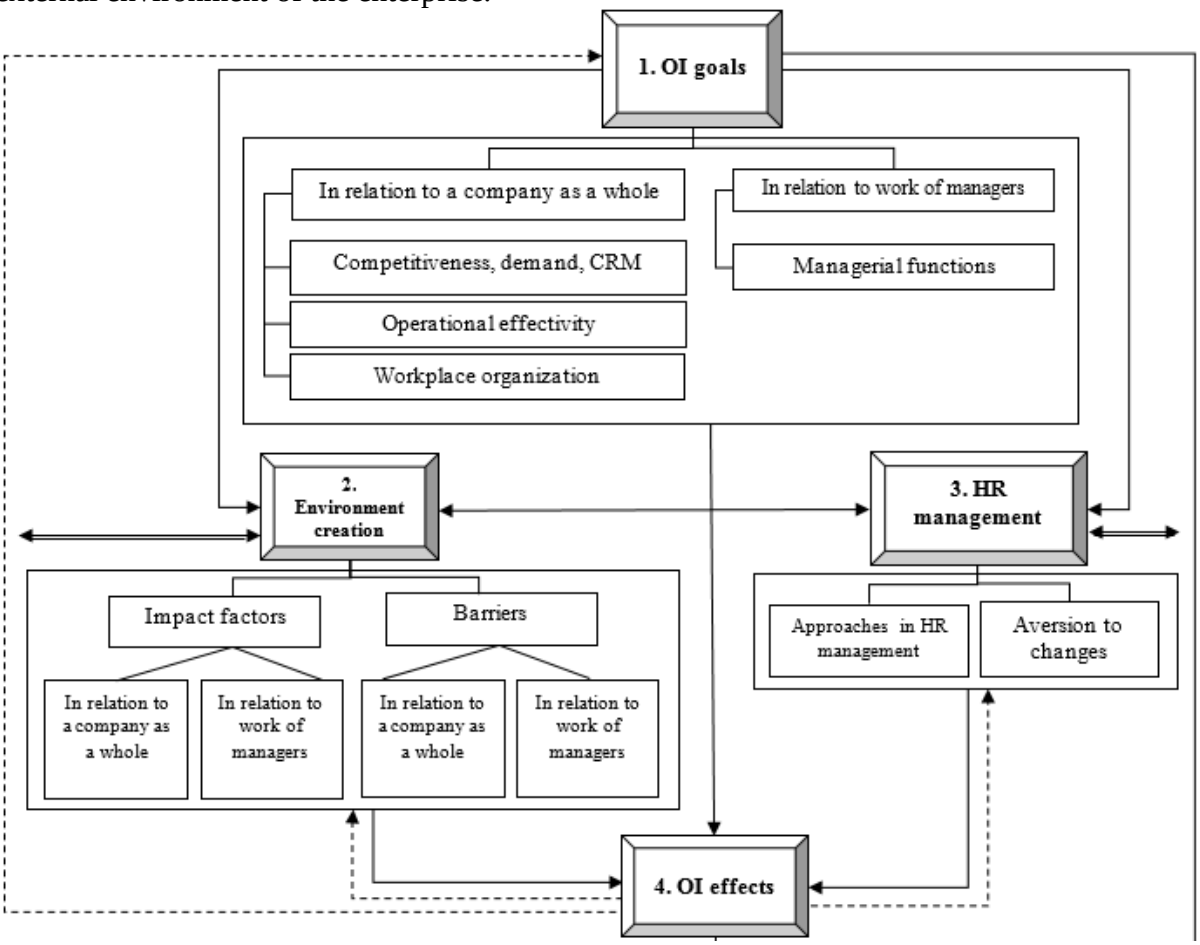
4. Results and Discussion

4.1. Key factors analysis and model design

As can be seen from Table 1, we have identified five key factors. Their selection has been greatly influenced by the latest Oslo Manual of 2005, which mentions the unresolved key issues relating to organizational innovations that could be explained by additional data. Since the Oslo

Manual has been released - more than ten years ago, many research has been carried out during this period, and this has allowed the spread of new facts. Many results from these studies are therefore part of our model.

It is an open business model based on factors such as organizational innovation goals, environment creation, human resources management, effects and organizational innovation measurement. Figure 1 depicts the main and the feedback interactions interpreting the linkages between the individual elements of the model. Full line markings occur in the case of primary linkages representing the direct relationship between the individual elements, the broken line shows the feedback interactions and the double-line shows occurrence of interactions with the external environment of the enterprise.



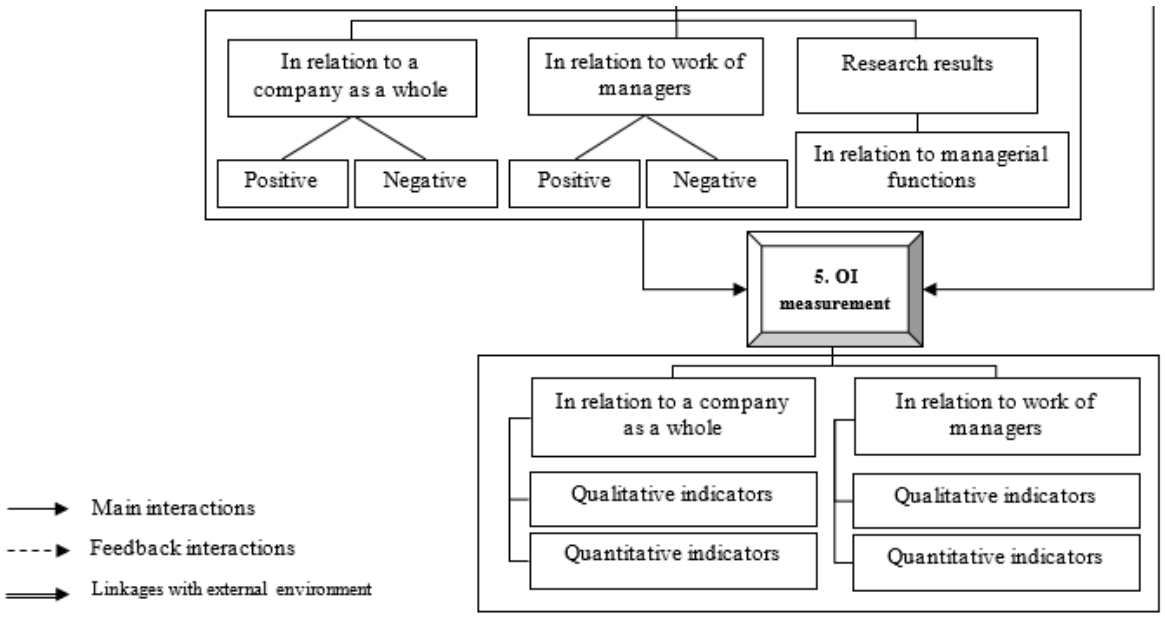


Figure 11 Model of key factors of implementation and sustainability of organizational innovations Source: Own processing.

The first step was to set goals for organizational innovations. It is essential for an enterprise to know what is to be achieved through a particular innovation and in the context of the business environment, the business and innovation strategy has clearly defined its objectives. Based on their knowledge, the company creates the right environment for their successful implementation and sustainability, and chooses the most effective way to manage human resources. Both of these factors are closely related to each other as managers hold certain attitudes, views, various degrees of human resource management experience and skills, which directly affect the creation of a suitable environment supporting the positive course of implementation and sustainability of organizational innovation and vice versa, knowing the influence factors and organizational innovation barriers allow them to choose the right strategy in the field of human resources management and concepts to help managers eliminate or, to resolve employees' aversion to change. The importance of setting organizational innovation goals also results from their final comparison with the actual results that are the content of the fourth factor - the effects of organizational innovation. These results will enable businesses to see if organizational innovation goals have been met. The effects of organizational innovation will also vary depending on how the business or managers, managed the creation of an appropriate support environment and the process of human resource management. In the case that an enterprise detects that interim results deviate from the desired status during implementation, it may choose to intervene in the creation of the environment or in the management of human resources. As we have already mentioned, measuring and evaluating the effects of organizational innovation can be done by comparing the goals and effects of them, or by measuring the company's overall dynamic innovation competence. Businesses can choose several indicators, whether qualitative or quantitative. They are further elaborated below. In the following part of the paper we present detailed elaboration of individual model factors.

Objectives of organizational innovations may apply to different areas of the enterprise. We have divided them into objectives that apply to the enterprise as a whole and those related to the work of managers. The purpose of this division was not to exclude the work of managers from the business. We have taken into account that managers are its inherent part, but we wanted to

emphasize the performance of their work and the benefits for the enterprise. We have expanded the division of enterprise-wide targets into groups: competitiveness-driven, customer-driven and business-related goals, operational efficiency goals, workplace goals and remaining, secondary goals. Goals related to the work of managers were divided into two groups, those related to the performance of managerial functions and to secondary goals. The content of the second factor - the creation of the environment, was a description of the factors that influence it and the barriers that slow down, respectively obstruct successful implementation and sustainability of organizational innovation, creating an inappropriate environment for their adoption. In this case, we used only one classification, goals related to the operation of the enterprise as a whole, and those related to the work of managers. The human resources management factor focuses on the different approaches and strategies in the field of human resources management that are necessary for successful management of business changes, as well as a description of concepts aimed at overcoming employees' aversion to change. In this case, we have dropped the division, since it is a factor that is preferably related to the work of managers. The fourth factor focuses on the results of organizational innovations in the form of so-called effects. Again, we've divided them into those that apply to the entire business, those that are related to the performance of managerial work, and the positive and negative ones. In this case, we also reported the results of the research, because the analytical part of the paper contains only the results of the most important innovations with respect to some of the four evaluated aspects, in this regard we have provided a survey of the effects identified by us for all organizational innovations. The last factor was the measurement of the effects of organizational innovation through selected indicators. The innovative activity of an enterprise can be measured on the one hand by fulfilling the set goals of organizational innovation, but at the same time there are indicators to measure the company's dynamic innovation competence. Thus, the organization can find out whether improvements in performance, productivity, customer relationships, organization of the workplace and the associated efficiency of activities, etc., have occurred after the implementation of organizational innovations. These findings support the building of higher competitiveness. In this case, we also divided the indicators into those that apply to the whole enterprise and those related to the work of managers, with their further division in qualitative and quantitative ones.

Description of selected factors

1. Factor - organizational innovation goals

This factor is based on a clear definition of what a particular innovation should achieve. This is the identification of the so-called company driving forces. The goals of implementing organizational innovation may be oriented to different areas of the enterprise, e.g. customer relationship management, operational efficiency, improved knowledge acquisition, sharing of products, markets, efficiency, quality, or the ability to learn and make changes. Within this factor, we have split the objectives into those that apply to the enterprise as a whole and those related to the work of managers. We also divided the first group according to the Oslo Manual for competitiveness, demand and customer relations goals, goals related to operational efficiency, and the last group focused on the organization of the workplace. We've placed the remaining goals in the secondary category. In the second group, we divided the goals into the goals related to the performance of managerial functions, which were mainly based on our research, as well as secondary goals. Their review is in Table 2.

Table 2 Organizational Innovation Goals

In relation to the company as a whole	In relation to work of managers
Focused on competitiveness, demand and customer relationships	*Oriented to managerial functions*
reduce response time to customer needs	shorten manager scheduling time
improve market position	reduce the number of planning activities
increase the ability to adapt to different customer requirements	improve the traceability of the plans
Focused on operational efficiency	simplify the coordination of people, resources and activities
improve the quality of products and services	simplify the process of assigning responsibilities and powers
increase the flexibility of production and provided services	simplify the performance of analyzes and forecasts
increase production capacity	simplify managers' evaluation activities
reduce company costs (administrative, wage, production, e.g. reduction of unit labor costs, material consumption, energy, etc.)	improve communication, sharing and knowledge transfer between managers at different levels of management
increase the efficiency and speed of supply of goods and services	improve communication, sharing and knowledge transfer with externally cooperating businesses
shorten production time	increase motivation and satisfaction of managers
improve information technology capabilities (functionality, speed, availability and processing of information)	simplify information work
increase flexibility to adapt to changes	simplify the performance of the tasks / plans inspection
Focused on the organization of the workplace	simplify the performance of quality control
improve communication, sharing and transfer of knowledge within the enterprise	early detection of causes of misconduct
improve communication, sharing and transfer of knowledge out of the business	shorten the time of approval and decision-making processes
improve the interaction between business activities	increase the availability of decision-making information
increase employees satisfaction	increase the complexity of reporting
increase employees productivity	*Secondary*
Secondary	increase the productivity of managers' work
reduce negative environmental impacts	increase managers' creativity
improve safety and health at work	reduce the extent of utilization of managers
meet regulatory requirements	improve the work / performance of managers' tasks
	increase the qualifications of managers

Source: Own processing.

2. Factor - environment creation

The second factor focuses on creating an environment supporting the implementation and sustainability of organizational innovation. This factor is very closely related with the human resource management factor, as managers, by their attitudes, opinions, abilities and experience, directly influence the process of implementation of innovation and encourage the creation of a suitable environment for their adoption. In this case, we have pointed not only to the factors affecting the corporate environment but also to the barriers to the successful implementation of organizational innovations. Their brief overview is found in Tables 3 and 4.

Table 3 Factors influencing the formation of the environment

Impact factors in relation to the enterprise as a whole	Factors of influence in relation to the work of managers
the frequency of receiving organizational innovations	education and skills of managers
the regularity of accepting organizational innovations	experience of managers
business size	the level of creativity of managers
education of the workforce	the ability to transform creative ideas into reality
geographical capability of the business	managers' attitude to change
business specialization	style of leadership
functional differentiation	management tools
professionalism	flexibility and adaptability of managers
formalization	
centralization	
company culture	
company atmosphere	
company resources	
organizational structure and systems, including remuneration	
cost of business	
the dynamics of the environment (ability to respond to customer needs, flexibility of production, flexibility and adaptability of employees)	
external and internal communication	
level of knowledge acquisition and sharing	

Source: Own processing.

Table 4 Barriers to Organizational Innovation Implementation

Barriers in relation to the enterprise as a whole	Barriers in relation to the work of managers
lack of available funds	misunderstanding the purpose of the change
lack of time and staff	no feelings of need change something
too high the cost of innovation	fear of loss of position in the enterprise
inadequate qualification of employees	fear of weakening power
lack of information	insufficient support of company management
inadequately supporting legislation (restricting laws and tax rules)	underestimating the time necessary to discuss all the facts relating to change
insufficient infrastructure	inability to support change
rivalry between departments	failure to observe sequence, skipping key steps in the change management process
negative business climate	overestimate current management practices and unwillingness to change them
structural rigidity	wrong implementation of change management rules and principles
lack of motivation	feeling of work insecurity
possible business risks associated with change	lack of identification with change
lack of engagement culture	the threat of a change to existing social relationships
limiting vertical relationships	conflicts of corporate and personal goals
inappropriate communication	insufficient qualifications and experience
innovative activity without clear focus	choice of inappropriate methods for managing changes
directives from top to bottom	conflicts leading to independence and unwillingness to cooperate
development of inferiority culture	
past negative experience with innovations	
too much time for return on innovation	
negative attitude of employees to change	

Source: Own processing.

Summarizing the impacts and barriers that influence the process of organizational innovation implementation can help managers gain a wider view of the areas where extra attention is needed. Managers can take use them in deciding and managing change.

3. Factor - Human resources management

The third factor is the focus on approaches in human resources management, as well as on the problem of aversion of employees in implementing organizational changes in the company. Since these activities are related to the performance of managers' work, we do not divide them into those that apply to the entire enterprise and those related to the performance of their work. Recommended approaches to human resources management are: creation of training programs (motivation of employees to acquire new knowledge and skills), creation of programs aimed at improving human relations, support of the process of knowledge management (gaining,

distributing, interpreting and storing knowledge), setting up a remuneration and evaluation system for employees, increasing the satisfaction of employees with work, support for engagement and loyalty, motivation for employees, creation of opportunities for employee involvement in decision-making processes, empowerment of employees with higher degree of delegation, increasing their autonomy and accountability, appropriate way of communication (upward, downward and side-to-side), maintaining a safe environment (problem and conflict resolution, relationship management, creating a credible climate), teamwork support, employee career management, feedback on performance and satisfaction with providing feedback from multiple sources, openness to employee opinions, analyzing employee behavior and attitudes, reducing pressure and eliminating the burden on employees.

When implementing the innovation, it is also worth considering the reverse behavior of employees. In order to avoid unwanted aversion or resistance, companies can choose appropriate strategies to reduce and overcome the negative effects of resistance to organizational change and the subsequent proper implementation of these strategies that are essential to the success of organizational change implementation. In particular they are - good communication (regular and bilateral), involvement of employees in decision-making processes and enabling participation in processes of planning and implementation of change, control of psychological environment in the collective, control of employee engagement, psychological trainings and training, counseling, business development, greater autonomy of tasks performed, providing feedback from work, motivating employees to accept changes, increasing employee satisfaction, (good relations with colleagues, training opportunities, work flexibility), awareness of changing and examining employee attitudes (interviews with employees, or anonymous questionnaire surveys), increasing employees' readiness to change (providing information about changes, clarifying the necessity of admission changeability, suitability to achieve business goals, pointing to the benefits and disadvantages of change, showing successes after implementing changes), building credibility (visible and public support for formal and informal business leaders), availability of business leaders (to answer questions about change), direct involvement of the company's management in the implementation of changes (participation in trainings, reception of feedback from employees, willingness to solve employee problems), personal interaction between business leaders and other managers (to facilitate bilateral exchange of information on change-related issues), selection of staff to create a coalition of supporters of change.

An overview of human resources management practices and the elimination of aversion of employees provides an insight into what managers should pay attention to when implementing organizational innovations. Each of them should choose the procedures, taking into account their abilities and opportunities, the conditions of the business, as well as the knowledge of the employees who are entrusted with it. These findings can help managers more effectively manage human resources, which are a prerequisite for successful implementation.

14. Factor - Effects of organizational innovations

As we have already mentioned for the first factor, businesses that have decided to innovate should identify innovation goals in advance. These are then compared with the effects of organizational innovations. It is recommended not only to collect the data related to the goals but also the effects of innovation during the period under review, as actual effects may differ significantly from those expected. Organizational innovation effects can be divided differently. Some divide them into positive and negative ones, those that refer to the individual level or general business performance. Table 5 gives a brief outline of the results divided to results in relation to

the enterprise as a whole and in relation to the work of the managers, divided into positive and negative.

Table 5 Effects of Organizational Innovations

Effects of organizational innovation in relation to the enterprise as a whole	Effects of organizational innovation in relation to the work of managers
Positive effects	*Positive effects*
reducing response time to customer needs	shortening planning activities timeskrátenie času plánovacích aktivít
improving the quality of products and services	reducing the number of planning activities
improving the flexibility of production and provided services	improving the traceability of plans
increasing production capacity	simplifying the coordination of people, resources and activities
reduction of company costs (administrative, wage, production, eg reduction of unit labor costs, consumption of materials, energy)	simplifying the process of assigning responsibilities and powers
shortening production times	simplify the performance of analyzes and forecasts
increasing the efficiency and speed of supply of goods or services	increasing motivation and satisfaction of managers
improving information technology capabilities (functionality, speed, availability and processing of information)	simplification of evaluation activities
improving communication, sharing and transfer of knowledge within the enterprise	simplification of work with information
improving communication, sharing and transferring knowledge out of the business	improving communication, sharing and knowledge transfer between managers at different levels of management
improving interaction between business activities	improving communication, sharing and the transfer of knowledge with externally cooperating enterprises
increasing the ability to adapt to different customer requirements	simplify quality control
reduction of harmful effects on the environment	simplify the execution of tasks / plans
improving safety and health at work	early detection of causes of misconduct
meeting regulatory requirements	shortening the time of approval and decision-making processes
increasing competitiveness	increasing the availability of decision-making information
increasing flexibility to adapt to change	increasing reporting complexity
increasing motivation, commitment and employee satisfaction	reducing extent of utilization of managers
increase employee productivity	increase productivity of managers' work

increase overall business performance	increasing managers' creativity
raising awareness and image of the business	increasing the qualification and professional level of managers
increasing operational efficiency	improving work / performance of managers' tasks
improving financial performance (increasing market share, profits and turnover)	increasing the qualifications of managers
increasing the qualification and professional level of employees	increasing flexibility to adapt to change
better working environment	*Negative effects*
Negative effects	unmanaged change management
occurrence of operational problems	conflicts between managers
financial risks	failure to overcome resistance to change
uncontrollable business growth	inability to solve the problems
the risk of image loss and reputation	load malfunction - negative impact on health of managers
problems with employees and customers	
negative effects on safety and health at work	
negative impact on the environment	

Source: Own processing.

These results can help managers to get an overview of the positive and negative effects of organizational innovations both in relation to their business and their work and can influence their strategic decision-making.

5. Factor - Measuring Organizational Innovations

Businesses consider innovation to be very important, but they rarely measure their innovation potential. Most often, they assess how the implementation of the innovation intention is reflected in the results of the economy, using traditional financial indicators as returns or return on capital spent on innovation. However, the use of such indicators does not create sufficient pressure on companies to evaluate their results compared to competitors. For this reason, we also include other indicators that can be divided into two areas in terms of content:

- meeting the set objectives of innovation,
- measuring the dynamic innovation competence of a business.

A brief overview of the results of the indicators divided into qualitative and quantitative in relation to the enterprise as a whole as well as in relation to the work of managers is in Table 6.

Table 6 Indicators of measuring the innovation activity of enterprises

In relation to the enterprise as a whole	In relation to the work of managers
qualitative	*qualitative*
customer satisfaction	the satisfaction of managers
response time to customer needs	the duration of the managers' planning activities
ordering time	the duration of the evaluation activities
production time	speed of coordination of people, resources, activities
fluctuation of key employees	availability and amount of information
	the duration of the approval and decision-making processes
enterprise cost (wage, administrative, delivery, material, energy) (€)	the duration of the performance of the quality control, the fulfillment of the tasks and the plans
amount of investment costs for innovation (€)	the duration of the analyzes and forecasts
market share (%)	*quantitative*
production size (pcs)	creativity (number of new ideas for a manager)
sales volume of products (€)	number of planning activities
profit per customer (€)	the number of tasks performed by the manager
return on capital spent on innovation (€)	productivity of the manager's work
number of introduced innovations over the reference period (pcs)	qualification level of the manager (number of acquired and shared knowledge)
number of orders made (pcs)	
number of complaints (pcs)	
utilization of production capacity (%)	
percentage of faulty goods (%)	
air dust (mg/m3)	
smells from production (%)	
mass emission flow (%)	
number of injuries (pcs)	
% of attained customers	
% of return on capital	

Source: Own processing.

Such a reiew of indicators can provide enterprises with practical use in identifying their innovation potential and to broaden the view of measuring the set objectives of innovation and the dynamic innovation capability of an enterprise.

4.2. Benefits, research limits, and other areas of research direction

One of the most important benefits of modeling can be that it provides findings that can contribute to the decision-making and management of changes related to the implementation of organizational innovations, thereby helping to successfully master the process. It helps to gain a

wider view of the pitfalls that need to be attended to, which helps to avoid unnecessary management mistakes. It is suitable for different types of subjects. The individual factors of the model are elaborated on the basis of a large number of professional literature, quality publications, own research, but also a wide range of empirical research conducted directly in the enterprise environment, increasing its qualitative level and emphasizing the connection of theory and practice. It also highlights the importance of the work of managers throughout the process of implementing organizational innovation. These results bring novelty and originality, as there is no comprehensive study that would focus on exploring the same issues. The contribution thus brings new, unclear findings in the field. At the same time, tackling this issue provides an overview of new opportunities for other areas where businesses can choose to innovate.

We have encountered several limitations when addressing the issue. For some, the combination of the five factors may be inadequate or insufficiently elaborated. It is really a broad issue in which our attempt to include in the model areas that, from our point of view, both directly influence the process of implementation and sustainability of organizational innovation, but also highlight the importance of the work of managers. It should be taken into account that each business is a specific subject. It should be able to assess its current situation in terms of its overall functioning, taking into account its limitations, capabilities and capabilities, and thus to take concrete decisions. This model is based on a number of studies and literature but is not verified in practice. This creates space for the expansion of research in that direction. Therefore, we plan to carry out our next research in a selected set of businesses where we will verify its usefulness and benefits for practice. On this basis, we will come up with drafting forms for the practical use of the model, which from our point of view allows businesses to capture the experience of implementing organizational innovation in practice, to promote learning culture and to find own best practices and innovative approaches to the model.

Other areas of research:

1. Finding the relationship between the work of managers and the requirement of the ISO 9001: 2015 standard - referred to in Article 7.1.6. *Knowledge of the organization*, and the relationship between organizational innovations and the requirement of ISO 9001: 2015 in Article 6.3. *Planning changes.*

2. Analysis of key indicators of the assessment of innovative prosperity of organizational innovations.

Methods used include questionnaire surveys, personal interviews, observation or analysis of quality management systems in specific businesses. Possible limitations may be the time-consuming nature of relevant data, which will also depend on the willingness of business managers to cooperate.

5. Conclusion

The issue of organizational innovation and its relationship to the work of managers is extremely important and up-to-date because business environment changes are becoming a day-to-day reality with which managers are confronted at all levels of management. The aim was to propose a model serving as a support tool for business managers in a complex process of managing the implementation and long-term sustainability of organizational innovation. The design of the model was preceded by identifying, from our point of view, the most important factors that influence the process of managing the implementation of organizational innovations. These were factors such as organizational innovation goals that have been developed in relation to the enterprise as a whole, with a division into those that focus on competitiveness, demand and

customer relationships, operational efficiency and organization of the workplace, secondary goals, and work goals managers, focusing on managerial functions and secondary goals. The second factor was the creation of an environment focusing on factors of influence and barriers to the introduction of organizational innovations, as well as in relation to the enterprise as a whole and to the work of managers. The third factor of human resource management included recommended approaches to human resources management and overcoming employee aversion to change. The fourth factor of organizational innovation effects was once again divided into those that refer to the enterprise as a whole and those relating to the work of managers, dividing them into positive and negative. Within this factor, we also mentioned the results of the research describing the effects in relation to the performance of managerial functions - planning, organizing, conducting people, controlling and decision making. In the last factor of measuring organizational innovation, we introduced the indicators of their measurement again in relation to the enterprise as a whole and to the work of the managers, divided into qualitative and quantitative ones.

The choice of factors has been greatly influenced by the latest Oslo Manual of 2005, where there are unresolved key issues relating to organizational innovation that could be explained by additional data. We have used the goals and effects of innovation that we have defined as two separate factors. Impact factors and innovation barriers have been included in another factor - environment creation. We have identified the innovation measurement as another separate model factor. The model has been supplemented by a human resource management factor, the content of which was the most common approach to management and concepts that support removal, respectively eliminating employee aversion to changes as important prerequisites for successful implementation and sustainability of organizational innovation. We believe that the detailed development of the individual factors can help business managers to successfully manage the complex process of implementing and sustaining organizational innovation.

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