

## PARADIGMS OF MANAGEMENT OF INNOVATIVENESS IN CONCEPTS OF MARIA ROMANOWSKA, DOCTOR HONORIS CAUSA OF THE CZĘSTOCHOWA UNIVERSITY OF TECHNOLOGY

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Professor Maria Romanowska is standing in the foreground holding the certificate

**Abstract:** The aim of the herein paper is to present the problems of innovativeness in the management of an enterprise in terms of the concept of Professor Maria Romanowska - Doctor Honoris Causa of the Czestochowa University of Technology. In this paper, the conditioning of the implementation of innovations has been presented. In particular, the author at hand has displayed innovativeness with reference to the sectors of high and low technologies. Innovativeness has also been viewed in an international context. Furthermore, the concepts of other authors in the field of innovativeness have been indicated.

**Keywords:** Management of innovations, innovativeness of enterprises

**DOI:** 10.17512/znpcz.2018.4.01

## **Organizational procedures**

Innovativeness in management should be acknowledged as a very significant problem of economic theory and practice. The theoretical concepts however, indicate substantial differentiation. In order to illustrate this problem in the herein paper, the views of a multitude of authors have been presented by first and foremost displaying the scientific output of Prof. dr hab. Maria Romanowska Doctor Honoris Causa of the Czestochowa University of Technology. Professor Maria Romanowska was issued with the title of Doctor Honoris Causa on 27 June 2018. The process of issuing the title of Doctor Honoris Causa was participated in by the following:

Supervisor:

Prof. dr hab. Maria Nowicka-Skowron Czestochowa University of Technology

Reviewers:

Prof. dr hab. Ewa Bojar, Lublin University of Technology

Prof. dr hab. Andrzej Kaleta, Wrocław University of Economics.

## **Management of innovations in context of lecture of Professor Maria Romanowska**

The starting point for deliberations on the problematic issue of innovativeness in the management of the economy and enterprises was the approval of the application formulated by Professor Maria Romanowska, which was worded as follows: "Poland belongs to the group of lowly innovative countries, while the innovativeness of Polish enterprises (excluding small enterprises) is average and differentiated, yet particularly in the group of larger enterprises there is a multitude of companies which are deserving of the name of innovators" (Romanowska 2015, p. 5). By continuing the notion of innovativeness, it is claimed that the requirements of competitiveness have led to the fact that activities of a pro-innovative nature are essential in enterprises. The substantive account is associated with the lecture for the ceremony of the Doctor Honoris Causa, during the course of which Professor Maria Romanowska put forward the following question: Do enterprises of the sectors of high technologies apply different strategies than the enterprises from the remaining sectors?

In providing the answer to this question, she presented the structure of the share of innovatively active enterprises in sectors of high and low technologies (*Table 1*).

**Table 1. Share of enterprises that are active in an innovative sense in sectors of high and low level technologies**



Share of innovatively active enterprises in sectors of high and low technologies

	Percentage share of innovatively active enterprises in the group of "industrial processing"
High technologies	47.5
Medium-high technologies	36.8
Medium-low technologies	20.0
Low technologies	14.3

Source: Działekold innowacyjne przedsiębiorstw w latach 2014-2016, „Analizy Statystyczne”, GUS, Warszawa 2017, p. 22.

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The table above indicates that almost half of the analysed enterprises are enumerated among the sector of high technologies, while approximately 37% are enterprises representing medium-high technologies. The group of medium-low and low technologies represented only 34.3% of enterprises. Likewise, the structure of enterprises investing in R&D in the sectors of high and low technologies is interesting (*Table 2*).

**Table 2. Share of enterprises investing in R&D activities in sectors of high and low technologies**



Share of enterprises investing in R&D in sectors of high and low technologies

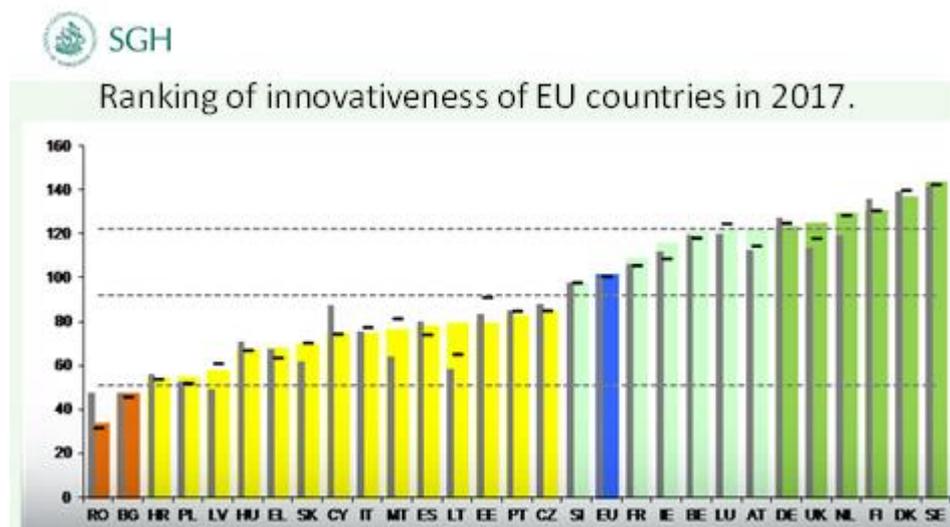
Sector	Percentage share of enterprises that incurred internal outlays on R&D work in the group of "industrial processing"
High technologies	24.4
Medium-high technologies	15.5
Medium-low technologies	5.8
Low technologies	2.0

Source: Nauka i technika w 2015 r., „Informacje i Opracowania Statystyczne”, GUS, Warszawa 2016, p. 119.

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On the basis of the afore-mentioned data, it is possible to state that the level of interest of enterprises in investing in research and development activities is at a medium level as only 50% of business entities invested in this form. In this context, the ranking of the innovativeness of the EU countries is significant (*Figure 1*).



**Figure 1. Ranking of innovativeness of EU countries in 2017**

Lecture of Professor Maria Romanowska on 27 June 2018.

The ranking indicates that in terms of innovativeness, Poland occupies a distant 25<sup>th</sup> position among the EU countries. On the basis of data, it is thus necessary to state that the strategies of innovativeness are largely ineffective in Polish innovative enterprises.

On the basis of the results of research conducted by Professor M. Romanowska, the following conclusion was formulated:

Enterprises from sectors of high technologies implement related diversification more frequently than those of other sectors. Furthermore, these enterprises are characterized by a higher level of internationalization, as well as a quality advantage that is based on innovations. Likewise, the greater tendency of enterprises from sectors of high technologies to cooperate with other organizations is visible.

### **Paradigms in management of innovativeness in theories of science of management**

The context of innovativeness justifies the reference to the concept of a multitude of authors in this area. The essence of innovativeness is first and foremost perceived from the viewpoint of technologies and the type of innovativeness.

G. Gierszewska in undertaking the issue of innovativeness relates to the aspects of contemporary technologies, while concentrating on the information systems within the framework of which the knowledge that is essential for strategic management is passed on. The essence of information systems should fulfil "...the function of the communication system of the organization, which combines the elements of the system of management as a whole." In referring to the information technologies, the author at hand emphasizes that their aim is to create new forms of work that determine challenges for strategic management (Gierszewska 2017, p. 236). In the problems of innovativeness of Polish industrial enterprises, K. Krzakiewicz and Sz. Cyfert indicate the fact that ... "a large proportion of the 'new' innovations are of an imitative nature" (Gierszewska 2017, p. 236). The authors in question also put forward the question relating to the reasons for leaving a large section of the Polish market with the aim of adapting imitative strategies. In answering the afore-mentioned question, the authors state that within the framework of the commercial potential in the possession of the Polish imitator, there are no enterprises on the market from countries of a high level of innovativeness. Furthermore, effective imitation ensures domestic goods are substitutes for imported products (Krzakiewicz, Cyfert 2017, p. 226). With reference to the previous research conducted on the basis of work by the Central Statistical Office entitled 'Innovative activity of enterprises' executed within the framework of the program of the Community Innovation Survey, it is possible to bring this down to the general conclusion formulated by Prof. M. Romanowska, which is as follows: "Poland belongs to the group of lowly innovative countries, albeit the level of innovativeness of Polish enterprises (excluding small enterprises) is average and differentiated, yet particularly in the group of larger enterprises there is a multitude of other companies that are deserving of the name of innovators" (Romanowska 2015, p. 5).

The evaluation of the level of innovativeness of Polish enterprises is the result of the fact that it is necessary to search for the methods/activities whose effect shall be the enhancement of innovative activity (Nowicka-Skowron, Krawczyk-Sokołowska, Mesjasz-Lech 2017, p. 270).

This area however, requires the undertaking of strategic challenges by Polish enterprises in terms of the social responsibility regarding the integration with organizations responsible for the innovativeness of the economy (Brzeziński 2016, p. 16, 17).

Innovativeness is also subject to analysis in the context of the resource theory according to which an enterprise is defined by a set of resources and skills. An approach of this type indicates the necessity of internal and external integration with the aim of ensuring the growth of efficiency and competitiveness. Competitiveness is the basis for the strategic analysis of an enterprise, in which the resources may be decisive in terms of the success of the particular organization. However, this success has its basis in the form of the resources and competences that first and foremost lead to innovations. Competences are perceived to be of key significance in terms of the competitiveness of an enterprise. By correctly identifying the key competences, the enterprise at hand is inspired to provide the

client with the greatest benefits. An enterprise should undertake activities that have the greatest impact and which shall in the future fulfil the needs and expectations of clients as effectively as possible. It is essential to emphasize the importance of this issue, particularly in terms of enterprises that are technologically sensitive, in which success is determined by innovativeness (Nowodziński 2013, pp. 98-99). The problem of success particularly emerges in the marketing aspects as “business design is thus a comprehensive design task, requiring several design disciplines to make a business successful. And in many cases business design is a collaborative act between stakeholders, a discursive enacting of business artefacts in a complex environment” (Junginger, Faust 2016).

The success of an enterprise is, in the vast majority of cases, the consequence of the innovativeness of employees and business entities, while also the indication of the paradigms of management.

The emphasis of the role of information systems in terms of management leads to the adoption of the concept, according to which the creation and implementation of innovations directly translates to the competitive advantage of the enterprise at hand (Diagram, p. 103).

Environment	Availing of MIS
<ul style="list-style-type: none"> <li>- trends, fashion</li> <li>- strength of competition in sector</li> <li>- clients</li> <li>- suppliers and partners</li> <li>- competitors</li> </ul>	<ul style="list-style-type: none"> <li>- systems of monitoring the environs of enterprise</li> <li>- BI systems</li> <li>- Big Data technologies</li> <li>- CRM</li> <li>- SCM</li> <li>- Web 2.0</li> </ul>

Opportunities and risk

Innovative process					
Ideas	Conceptualization	Development work	Testing	Implementation	Innovations
<ul style="list-style-type: none"> <li>Source of ideas</li> <li>- employees</li> <li>- R&amp;D department</li> <li>- clients</li> <li>- e-clients</li> <li>- prosumenci</li> </ul>		<ul style="list-style-type: none"> <li>Workplace:</li> <li>- R&amp;D department</li> <li>- platforms of cooperation with e-clients</li> <li>- platforms of crowdfunding</li> </ul>	<ul style="list-style-type: none"> <li>- experts</li> <li>- clients</li> <li>- prosumers</li> </ul>		<ul style="list-style-type: none"> <li>- business models</li> <li>- products</li> <li>- services</li> <li>- processes</li> <li>- management</li> <li>- customer service</li> </ul>

Possibilities and restrictions

Enterprise	Availing of MIS
<ul style="list-style-type: none"> <li>- skills and resources</li> <li>- financial obligations</li> <li>- digital competences of managers and employees</li> <li>- priorities of firm</li> </ul>	<ul style="list-style-type: none"> <li>- integrated IT systems of management</li> <li>- Web 2.0 technologies</li> <li>- mobile technologies</li> <li>- systems of supporting creativity</li> </ul>

**Figure 2. Availing of MIS in process of creating innovations**

Source: (Jelonek 2018, pp. 102-104)

The innovative process is influenced by the environment and the potential to adapt innovations to the opportunities and risks at hand, while also the possibilities and restrictions. In the process of innovations, the significant position of e-clients and prosumers in terms of the strategies of enterprises was indicated (Jelonek 2018, pp. 102-104). Thus, it is possible to assume that the innovative nature of information systems is a significant paradigm of management in the theory and practice of the science of management.

The technological conditioning of innovative activities, particularly information activities is the result of the potential for the creation of profit for the enterprise at hand. In this situation, this first and foremost relates to IT enterprises such as the following: Intel, Apple, Microsoft (Kościelniak, Skowron-Grabowska, Grabara 2017, p. 31).

Innovations are also reflected in terms of network ties, which facilitate the creation of the models of co-competition that directly influence the theory and practice of management (Jelonek 2017, pp. 77-86).

A network of innovations is filled with organizations functioning without borders in a borderless global market. In the structure of an organization without borders, the borders are removed both from a vertical and horizontal viewpoint. These changes have led to the appearance and functioning of an enterprise in accordance with the non-hierarchical model, while their result has become the phenomenon known as the “technological tsunami” which is occurring all over the world. The source of change has also been the consequence of downsizing, which occurred during the crisis of the 1980s. In that period, enterprises that pursued the limitation of the number of levels of management conducted a policy of simplification of the organizational structures. Despite the ebbing of business collapses, no changes were implemented. Their survival was the result of the paradigm of management, which is identified with the fact that “[...] leaner and flatter constructions facilitate fact reactions to the business environment” (Hejduk 2016, p. 35).

The aspect of the paradigm is also undertaken in the context of downsizing, or in other words, the reduction of the scope of activities with relation to organizational units. In this area, the employment of workers is indicated as a consequence of changing the methods of working. The afore-mentioned changes are first and foremost the result of implementing modern IT technologies, while also new ways of interpersonal communication of an internet nature. Hence, it is justifiable to underline the role of innovation models in the process of downsizing, which determine the achievement of effects on the part of the enterprise at hand.

In empirical research, the normative theory created avails of the measurement of reality, which leads to generalizations as to the cause and effect nature. In accordance with the aforesaid dependencies, the theory of breakthrough innovations has been worked out, which repeatedly indicate worse parameters than the features of the hitherto products sold on the market, yet their dominance in terms of supplies is realistic due to the consumer demand (Czakoń 2017, p. 145).

In the context of breakthrough technologies and innovations, it is necessary to indicate the strategic threats for enterprises – the competitors in their sectors.

Threats of this nature relate to both the entities availing of the hitherto technologies, as well as those that are the authors of the technological breakthrough. If the organizations, as the owners of the breakthrough technologies, have not adopted the appropriate strategies of implementation and sale of the new solutions, they are unable to achieve market success. Hence, it is also justifiable to put forward the viewpoint, according to which, ... “the key problem of all the participants of a sector in the conditions of a market breakthrough generated by a new technology is the mastery of the skills of predicting and following changes in the sector and the appropriate strategic reaction” (Romanowska 2017). In terms of innovative activities, the organizational conditioning is indicated, which includes the following:

- time factor,
- evaluation of the work of a manager according to single-stage criteria, while the clarity and stability of the principles of evaluation favours innovative behaviour,
- conducting the evaluation of a manager on the basis of the balance of his/her activities has an impact on the tendency to take risks, including risks in the area of innovations,
- creating the vibe of support for managers on the part of their superiors in situations of the occurrence of conflict as a result of the implementation of innovations,
- ensuring the appropriate pro-innovative conditions with the occurrence of variability and unpredictability.

The aforesaid conditioning was the subject matter of empirical research of the group of managerial staff in small and medium-sized industrial, trading and service providing enterprises. Furthermore, this also included the research conducted in healthcare entities, as well as judiciary administration. The research period ranges from 2012 to 2016.

Generally speaking, on the basis of the results of research the following conclusions were formulated in the sphere of the organizational conditioning of innovativeness (Rutka, Czerska 2017, p. 452):

- almost 60% of the managerial staff claim that they have sufficient time at their disposal for the optimal solution of problems,
- 66% indicate the conformance with the principles of unity among the management in enterprises, whereas 60% of managers in healthcare organizations and 71% of managers in judicial administration, in which the afore-mentioned conditioning has a positive impact on innovative activities,
- the balancing nature of the work of a manager results from the commonly applied principles in enterprises (78%), as well as those prevalent in healthcare entities (68%), in judicial administration (60%), in which the results indicate the pro-innovative attitudes of the managerial staff,
- 70% of those analysed indicated the process of supporting the manager in intricate situations, which favours the implementation of innovations,
- the occurrence of a high level of variability and unpredictability of the conditions in the area of managing encourages the staff to initiate innovative

undertakings, while the staff of the healthcare enterprises and organizations confirmed the occurrence of such conditions at the level of 50%, whereas in judicial administration such a response was indicated by merely 35% of respondents.

By referring to the afore-mentioned results of the research, it is necessary to emphasize that the business activities of enterprises indicates the highest level of risk, followed by the healthcare entities. Judicial administration is the area of the lowest risk, but also innovative potential (Rutka, Czerska 2017, pp. 456-458).

The scientific-didactic, as well as organizational activities of Professor Maria Romanowska should be acknowledged to be outstanding, full of creative passion, while also characterized by an enormous level of engagement and aid for academic employees and students. Each publication of Professor Maria Romanowska is a set of axioms and paradigms of management. Her attitude towards employees is extremely valuable and inspiring. It is necessary to emphasize her prevalent position in the sphere of rationalism and empiricism in terms of research and scientific effects. Professor Maria Romanowska is distinguishable by her scientific passion, very high level of propriety, while also the skill of building and developing research teams, openness to new scientific concepts, as well as the creation of new theories of organization, management and strategies (Nowicka-Skowron 2018).

The problematic issues of innovativeness in terms of managing an enterprise requires the management staff to become involved in research and development work. The stakeholders of enterprises should avail of the various forms of innovative support with the aim of improving the competitive position of business entities.

## **Conclusions**

The scientific-didactic, as well as organizational activities of Professor Maria Romanowska should be acknowledged as outstanding, while also full of creative passion and characterized by a huge level of involvement and assistance displayed towards academic employees and students. Each publication of Professor Maria Romanowska is a set of axioms and paradigms of management. Her attitude towards employees is exceedingly worthy and inspiring. It is essential to emphasize the prevalent position in the sphere of rationalism and empiricism in terms of research and scientific effects. Professor Maria Romanowska is distinguishable for her scientific passion, a very high level of propriety, the skill of building and developing research teams, openness to new scientific concepts, while also creating new theories of organization, management and strategies (Nowicka-Skowron 2018).

In the opinion of Prof. dr. hab. Ewa Bojar – the reviewer of the proceedings of granting the title of Doctor Honoris Causa, Professor Maria Romanowska is “an outstanding scholar – a wise person who is noble and friendly towards people of science and those practicing science at the highest level. By demanding so much from herself, she sets an example that success is attained by the talent possessed,

individual and team work, while also enormous creative engagement” (Bojar 2018). The second reviewer – Prof. dr. hab. Andrzej Kaleta states that “Prof. dr. hab. Maria Romanowska is without doubt one of the greatest and unquestionable authorities in the Polish environment of the science of management. Her achievements are exceptionally significant. They create the authority and widespread acknowledgement of Professor Maria Romanowska in the environment of Polish science. The particular position of Professor Maria Romanowska, apart from substantive aspects, is aided and abetted by her personality traits. Professor Maria Romanowska is a person who is widely respected and appreciated, while also liked in the academic environment, which is not without significance in terms of the evaluation of the position of a scientist (Kaleta 2018). In summing up the creative-scientific, as well as didactic and organizational engagement of Professor Maria Romanowska, it is important to appreciate her huge scientific output in each of its areas. The outstanding achievement has become the basis for granting the title of Doctor Honoris Causa of the Czestochowa University of Technology to Professor Maria Romanowska.

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## **PARADYMATY ZARZĄDZANIA INNOWACYJNOŚCIĄ W KONCEPCJACH MARII ROMANOWSKIEJ – DOKTORA HONORIS CAUSA POLITECHNIKI CZĘSTOCHOWSKIEJ**

**Streszczenie:** Celem artykułu jest zaprezentowanie problemów innowacyjności w zarządzaniu przedsiębiorstwem w aspekcie koncepcji Profesor Marii Romanowskiej - Doktora Honoris Causa Politechniki Częstochowskiej. W opracowaniu przedstawiono uwarunkowania wdrażania innowacji. Szczególnie Autorka wyeksponowała innowacyjność w odniesieniu do sektorów wysokiej i niskiej techniki. Innowacyjność rozpatrywano także w kontekście międzynarodowym. Wskazano ponadto na koncepcje innych autorów w zakresie innowacyjności.

**Słowa kluczowe:** zarządzanie innowacjami, innowacyjność przedsiębiorstw

Paper translation: Patrick Curran