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## **„Organisational innovativeness and efficiency of the blood public service”**

### **Abstract**

Innovativeness is a property that, depending on the level of analysis, can be identified in the context of an industry, organization, business unit, individual or innovativeness itself [Gopalakrishnan, Damanpour 1997; Klimas 2016]. This research lead us in various directions, promising to discover the phenomenon of innovation and its effects [Twaróg, 2018]. Public blood service units are entities whose primary goal is to provide safe blood and blood components to therapeutic use. These entities are not for profit and their effectiveness does not depend on the marketing of innovativeness products. A number of variables occurring within these entities, as well as their closer and further environment have an impact on the efficiency and, above all, the effectiveness of operation. Analysing the activity of organizational units of public blood service in Poland, it can be noticed that despite identical legal framework of functioning, similar market conditions, there are entities which are characterized by very high effectiveness of undertaken activities. Organizational innovativeness, which is the subject of this work, understood as the ability of an organization to introduce innovativeness [Wang, Ahmed, 2004], is in recent years an important variable, which in the private sector plays an important role in the management of an enterprise and often decides on competitive advantage. Looking at organizational innovation as a relatively complex phenomenon, it can probably be dimensioned and then not only studied its multi-faceted nature, but also measured [Twaróg, 2018]. In the case of the health care sector - public blood service units, determining the relationship of organizational innovativeness, considered in five dimensions (product, market, process, behavioral and strategic) to the effectiveness of these units is a kind of novelty. Therefore, it can be concluded that there is a noticeable knowledge gap in both theoretical and empirical studies.

The main aim of the study is: to check the existence of the relationship (determining the impact) of organizational innovation with the effectiveness of the blood donation system.

The aim of this programme is to provide a comprehensive overview of the effectiveness of the RCKiK. The main objective is accompanied by the following specific objectives from: a theoretical and empirical perspective - analysing and interpreting organizational innovation; recognizing the dimensions and level of organizational innovation of the RCKiK; identifying pro-innovative behaviors in the RCKiK; identification of stimulant and destimulant

of organizational innovation of RCKiK; a methodical - verification and adaptation of the organizational innovation measurement tool Wang and Ahmed in the non-profit area (replication of the tool) and an utilitarian - formulating recommendations / suggestions for blood management practice.

Identification of knowledge gaps taking into account the need to implement this research project was the basis for the formulation of the research hypothesis: organizational innovation is positively related to the effectiveness of the public blood service, understood as the effectiveness of the leading unit (implementing these activities) of RCKiK.

The uniqueness and interdisciplinarity of the research problem, including above all its multithreading and multidimensionality, required the selection of a number of research methods, appropriate for particular problem areas. The research project was prepared in the convention of the mixed approach [Creswell, 2002] (multiple heterogeneous), using both quantitative and qualitative methods. In order to increase the appropriate level of accuracy and reliability of conclusions, the principle of triangulation was used: theoretical (scientific achievements in the field of: economics, management, health sciences), data (primary sources - raw data from the questionnaire and secondary - scientific literature, websites, databases of the National Blood Centre, quantitative and qualitative data) and methods (quantitative - measurement questionnaire). The burden of research proceedings rested on induction (association of quantitative methods) and deduction (association of qualitative methods - triangulation of research methods). The collected data were subjected to quantitative analysis, for hypothesis testing, using statistical methods: reliability and Alpha Cronbach analysis, factor analysis, modelling of structural equations, correlation and regression.

In the public blood service, the organizational leader are the centres of blood donation and blood therapies, which are characterized by organizational innovativeness. The research shows that organizational innovation strengthens the effectiveness of the blood donation and therapeutic system. Organizational innovation has a weak but statistically significant positive influence on the effectiveness (strength 0.241) of the organization, which allows for positive verification of the hypothesis formulated. Organizational innovation in the CKiK is particularly visible in the behavioural-processing dimension (improvement of the labelling of blood component lines, introduction of modern testing equipment, creation of an automatic line for virological tests and blood groups donors, attaching samples for the fractionator to the plasma container by the department of preparation, new procedural solutions to prevent destruction of blood components) and products (artificial tears, closed method of production of postpartum transfusion, production of pediatric plasma packaging after inactivation). The search for

innovation in regional blood donation and therapeutic centres is continuous - evolutionary, and effectiveness is observed from a quality and efficiency perspective. Regional blood donation and blood therapy centres are units that do not have a clearly defined culture and innovation strategy, as well as the organizational climate does not prioritise innovation. The main destimulants of innovation of regional blood donation and blood therapy centres are: lack of financial resources, difficulties in obtaining external sources of financing (too much bureaucracy), organizational and technical aspect, e.g. lack of a separate organizational unit that would serve knowledge and experience. The main stimulants of innovation of regional blood donation and blood therapy centres are: possibility of personal development and professional improvement, access to the latest news - knowledge and information, economic aspect.

Recommendations for improving efficiency through the implementation of innovative solutions may be: implementation, harmonization and coordination of strategies and programmes supporting innovation in units, dissemination of information about support for innovative activities, strengthening mechanisms stimulating pro-innovative activity (financial and non-financial aspects), organization of trainings, debates raising awareness of the essence of innovation and its impact on the unit's activity at the management (directorate), managerial and other employees' level, greater involvement of financial resources, establishing more dynamic cooperation, lasting partnership between blood donation centres and scientific and research units, increasing the level of internationalization (searching for benchmarks).

The research clearly shows that organizational innovativeness strengthens the effectiveness of the public blood service.